A STUDY OF MERGERS AND ACQUISITIONS OF INDIAN STEEL INDUSTRY SINCE LIBERALIZATION

ABSTRACT
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Abstract

The present world scenario is such that it is the economic prowess of a country which tends to determine its standing in the world order rather than its military power. The boundaries are disappearing and the flow of goods, services, technology, capital, capital, labor, etc is easier and hassle free comparatively than it was ever before. The production centers are no longer localized with the emergence of transnational corporations which have got productions centers sprawled all over the world. Foreign investment plays a pivotal role in the development process as it provides the much needed capital influx. Accordingly the domain of the policies have also shifted from the national to international arena as the issues to be regulated are no longer confined within the domestic boundaries.

The trend of Mergers and Acquisitions is not very new in the developed world where consolidations and restructuring has been taking place for quite some time but in India it has picked up only after the New Economic Policy was unveiled in 1991. The Liberalization, Privatization and Globalization measures led to large scale de-licensing and de-regulation. It ushered in a new era for the Indian economy which was finally an open economy amidst fears and apprehensions that the domestic industrialists would not be able to survive the foreign onslaught. However contrary to the fears today the Indian Economy has made its presence felt globally and is no longer a soft target for foreign acquirers. In fact major cross border deals are being affected by Indian business houses in different parts of the world.

Mergers and Acquisitions (M&A's) have become a popular and significant tool in the hand of corporate and business houses for corporate restructuring. In the last decade

there has been a trend of consolidation where even big business houses are looking for an alliance in order to expand, kill completion, acquire technological competence, and gain entry in newer markets or for other strategic reasons. Deals worth billion are being announced now and then and making news. It appears that a Mergers and Acquisitions (M&A's) is structured for sure shot success. However there is more than what meets the eye and the companies which go in for this strategy has a wide range of complex issues to address before and after the merger in order to ensure that all the aspects of the fall in place and the expected synergies are realised. it is a daunting task to select a target company and formalize the entire process of merger or acquisition but the bigger challenge is to ensure successful implementation of the strategy and integration of the units merged or acquired.

The Steel Industry of India was de-licensed and de-regulated in 1991 and 1992 respectively. Since then it has come a long way to become the eighth largest steel producer in the world. There has been a steady increase in the demand for steel from both domestic and international quarters and this is expected to grow with the growing focus on investment in infrastructure all over the world. There has been a remarkable rise in the export of steel also while shortages in the domestic market were met by imports. Keeping in tune with the global trend of consolidation Indian Steel Industry has also witnessed major Mergers and Acquisitions (M&A's) both in the domestic and international sector. SAIL, a government is owned undertaking has been merging its loss making subsidiaries and expanding its production capabilities. Other major players like JSW, IMFA, and Essar Steel have also been involved in major restructuring. It is worthwhile to mention that Tata Steel is on a global acquisition spree where it acquired Thailand based Millennium Steel and Singapore based NatSteel. However the biggest acquisition was its acquisition of the Europe based Corus for approximately US$ 12.2 billion which was the largest ever cross border deal by an Indian corporate.

The **statement of problem** as stated in the thesis here is related to analyzing the profitability of Mergers and Acquisitions (M&A's) of Indian Steel Industry since Liberalization. Also the Researcher makes an attempt here to investigate the impact of the merger on the profitability of the merger. It is seen whether the merger undertaken is in the interest of the parties involved that is the shareholders, management, employees, creditors etc. of both the target and bidder firms.

The **issues** involved are Sector-wise analysis of Mergers and Acquisitions (M&A's) in the international and domestic arena is made to develop an understanding of the ongoing trend in the global and domestic arena. A brief study of the Indian Steel Industry is made in terms of growth and development and also a synoptic view of major Mergers and Acquisitions (M&A's) in the Indian Steel Industry. The major issue this thesis deals with is the effect of the merger and its measurement in terms of the post merger financial performance. The Researcher makes an attempt to identify the effect of the merger on the performance of the companies involved in order to establish the viability of the merger. _Various statistical and accounting techniques are employed to calculate various variables and statistics related to the company and an attempt is made to find out the effect of the merger on them.

Another issue dealt with in the thesis is yearly analysis of the movement in figures and studying them in the light of both macro and micro factors. A major issue faced is the financial crisis which hit the world economy in the year 2007 and had a deep impact on the Mergers and Acquisitions (M&A's) worldwide and also the valuations and post merger profitability of firms where operation were affected more by the macro factors than the micro factors.

The **Review of Literature** done sheds light on various gaps in the previous researches done in this field. The Researcher intends to put in an honest effort to provide her sincere contribution in this regard.

It is seen that in most works, it is the trends, policies; framework and requisites are investigated while the profitability and financial analysis of the mergers are not given due importance as was done in the case of Kang, N and S. Johansson (2000) and V, Harsh H. and Srividya, C.G. (2004). Also it is seen that the assumptions about characteristics of the firm, market condition, regulatory framework etc. might not apply in all cases. As in the case of Breinlich, Holger. (2006), the provisions of CUFTA do not apply in all Mergers and Acquisitions (M&A's). Some studies highlight the problem as in the case of Agrawal, Anup. et al. (1992) which reports that shareholders of acquiring firms suffer 10 percent loss as result of merger but appropriate measures to make the merger profitable are not dealt with. While some studies mention the theoretical implications of Mergers and Acquisitions (M&A's) they do not look into the practical application of it as is seen in the case of Perry, Jeffery S. and Herd, Thomas J. (2004) and Lee, Kyungmook. and Pennings, Johannes M. (1996).

However the major limitation is seen that in most of the studies, post-merger analysis, i.e. analyzing how the merged or resultant company performs financially after the merger is not done which is extremely important to study the viability and success of the Mergers and Acquisitions (M&A's) as is seen in Vithala, R. Rao. (1991), Jemison, David B. and Sitkin, Sim B (1986), Ghosh, Aloke and Lee, Chi-Wen Jevons (2000), Kumar, Nagesh. (2000), Lall, Sanjay (2002) and Lyons, Bruce. R (2001).

Some studies cannot be generalized as the sample size taken is very small as in Shick, Richard A. (1972) while some works suffer from statistical limitations as in Slusky, Alexander R. and Caves, Richard E. (1991) and Shughart II, William F. and Tollison, Robert D (1984).

Since 1991 the economic boundaries of India were opened due to which the investment climate in India underwent sweeping changes. The economic and corporate scene in India is discussed at length in order to investigate the past and present scenario of Mergers and Acquisitions (M&A's). Also a realistic attempt is made to make a prediction about the future of the ongoing drive of Mergers and Acquisitions (M&A's) on the basis of trends and reports.

A separate section is devoted to study the impact of Mergers and Acquisitions (M&A's) in the Steel sector predominantly.

The study entails a detailed study of worldwide mergers and acquisitions taking place in various sectors worldwide. An attempt has been made to cover all relevant mergers which have taken in various important sectors both in the domestic and international scene. Also the various issues relating to mergers and acquisitions are being investigated in detail. The study forays into the profitability analysis of Mergers and Acquisitions (M&A's) to study the synergies and values that are created as a result of the merger.

The main **objectives** this thesis deals with are enlisted as below:

1. Develop and understanding of mergers and acquisitions and also its need and relevance as an expansion and survival strategy in a globalized world.

2. A study is made of the Mergers and Acquisitions (M&A's) that have taken place globally and in India. The trend of growth of Mergers and Acquisitions (M&A's) as a tool of investment and growth is made.

3. The success of Mergers and Acquisitions (M&A's) is also evaluated to test its viability as a toll for growth and expansion.

4. Sector-wise study of Mergers and Acquisitions (M&A's) is made both globally and also of those that took place in India.

5. A study of the growth and development of the steel sector since 1991 is traced and also its financial performance in the last few years is evaluated

6. Mergers and Acquisitions (M&A's) are the quickest way for the firms to grow in size and value. Study the value and wealth created for the shareholder's of both the target and bidding firm as a result of a Mergers and Acquisitions (M&A's)

7. An analysis of the pre and post merger financial reports is done to examine whether the Mergers and Acquisitions (M&A's) led to a profitable situation for the merging and the merged firms.

8. It is seen whether the anticipated synergies are actually created after the Mergers and Acquisitions (M&A's) is structured.

9. Furthermore an investigation is made to throw light on the reaction of the market to Mergers and Acquisitions (M&A's) by making a comparison of the movement of Market Price per Share(MPS) and Earning per Share(EPS) both before and after the Mergers and Acquisitions (M&A's)

10. In recent times major Mergers and Acquisitions (M&A's) have taken place in the Steel Sector as a part of corporate structuring both globally and at the domestic level. In the thesis a detailed introspection is made of the same to analyze the motives and success of these Mergers and Acquisitions (M&A's).

The **Hypotheses** formed for the study are as follows.

1. Testing the relationship between Pre and Post Merger Profitability

H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger Profitability

H_a (Alternative Hypothesis) = There is a relation between the Pre and Post-merger Profitability

2. Testing the relationship between Pre and Post Merger Capital Employed Turnover Ratio (CETR) or Fixed Asset Turnover Ratio (FATR)

H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger CETR or FATR

H_α (Alternative Hypothesis) = There is a relation between the Pre and Post-merger CETR or FATR

3.Testing the relationship between Pre and Post Merger Interest Coverage Ratio (ICR)

H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger ICR

H_α (Alternative Hypothesis) = There is a relation between the Pre and Post-merger ICR

4.Testing the relationship between Pre Merger Profitability and Pre Merger MPS

H_0 (Null Hypothesis) = There is no relation between the Pre-merger Profitability and MPS

H_α (Alternative Hypothesis) = There is a relation between the Pre-merger Profitability and MPS

5.Testing the relationship between Post Merger Profitability and MPS

H_0 (Null Hypothesis) = There is no relation between the Post-merger Profitability and MPS

H_α (Alternative Hypothesis) = There is a relation between the Post-merger Profitability and MPS

6.Testing the relation between Pre Merger MPS and Post Merger MPS

H_0 (Null Hypothesis) = There is no relation between the Pre Merger MPS and Post-merger MPS

H_α (Alternative Hypothesis) = There is a relation between the Pre Merger MPS and Post-merger MPS

7.Testing the relationship between Pre Merger EPS and Post Merger EPS

H_0 (Null Hypothesis) = There is no relation between the Pre Merger EPS and Post-merger EPS

H_α (Alternative Hypothesis) = There is a relation between the Pre Merger EPS and Post-merger EPS

8.Testing the relationship between the Pre and Post Merger Profit Margin

H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profit Margin

H_{α} (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profit Margin

9.Testing the relationship between the Pre and Post Merger Profit Rate

H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profit Rate

H_{α} (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profit Rate

The analysis of the case studies are presented below where each merger and each company involved is analyzed individually.

The analysis of Domestic Mergers and Acquisitions (M&A's) is as follows

The pre-merger analysis of **Visvesvaraya Iron and Steel Limited (VISL)** does not have a great picture of the financial condition of Visvesvaraya Iron and Steel Limited. There was a consistent fall in the PAT, RONW and ROCE for Visvesvaraya Iron and Steel Limited from 1994-98. For the year 1998 the total income fell by -13.12 percent but the main source of worry was the PAT net of P&E/total Income (Percentage) at -7.29 percent and it was negative for consecutive five years. The hypothesis testing though regression analysis shows that the profitability and CETR of Visvesvaraya had a limited impact on the post merger financials of SAIL, i.e at -0.43 and -0.01 units. The correlation coefficient was negative in both cases. Visvesvaraya was a loss making unit and its merger with its parent company gave it a new lease of life. The merger made it possible for SAIL to write off its losses and get deductions on tax payments. The dismal state of affairs led to a proposal of its being taken over by the Defence Ministry as 60 percent of its products that is alloy steel were required by it. The proposal however did not materialise and its association with SAIL continued. It was in November 2004 that VISL started making profits and since then it has been a profitable concern for SAIL.

The analysis of **Steel Authority of India Limited (SAIL)** in case of merger with Visvesvaraya shows that the profitability declined after the merger but it was due to the recession in the global and domestic steel industry. A restructuring plan was devise to bring about a turnaround in order to separate its non-core business from its main business of production and sale of steel. The Testing of Hypothesis for various financial parameters reveals that the relation between the Pre and Post merger

Profitability, CETR and ICR is statistically insignificant. Only when six years of Pre merger is compared to eleven years of post merger of CETR, the relation is significant. Hence the testing of Hypothesis supports the notion that the merger did not have much impact on the financials of SAIL. The relation between the Post merger Profitability and MPS is however significant. The MPS is greatly affected by Profitability and other factors. The Profitability is affected by 0.25 units with a unit change in MPS while MPS is affected by 1.72 units change for a unit change in profitability. The intercept is high at 55.94. The study of the Profit Rate and Profit Margin also highlights the limited impact of the merger on the financial performance and greater effect on the operational performance with the increase in the post merger Profit Margin by 3.92 percent while the Post merger Profit Rate increased by 70.37 percent.

The financials of **Indian Iron and Steel Company Limited (IISCO)** show that the company was running into losses at around 20 percent and it was only in 2001 that the rate of losses fell to -3.26 percent. The test of the two Hypothesis relating to the Pre merger Profitability and CETR of IISCO with the post merger statistics of SAIL shows that the both the relations are statistically insignificant. The correlation coefficient (r) is however negative at -0.71 indicating the negative impact which was however only -0.19 units. IISCO was running into losses prior to the merger and consequently had a negative impact on the profitability of SAIL while the CETR had a positive impact on the CETR of SAIL. The correlation was of low degree but it should be kept in mind that the setting off of losses may have reduced profitability but at the same time the tax liability as well. In case of CETR the effect on CETR of SAIL is just 0.02 units.

Steel Authority of India Limited (SAIL) was making profits since 2004 and the trend continued after the merger as well. However the testing of Hypothesis shows that it's only the relation between the Pre and Post merger ICR which is statistically significant. However the degree of correlation is low at 0.21. The Pre merger analysis of Profitability and MPS depicts that the relation between the two parameters is statistically insignificant. However post merger the relation is statistically significant and there is a high degree of positive correlation. The Profitability is affected by 0.05 units for a unit change of a unit of MPS while MPS is changed by 15.01 units change for a change in profitability. The intercept is high at -128.62. The hypothesis testing the Pre and Post merger MPS and EPS shows that there is an effect of the merger on the two variables. For MPS the relation is moderate at 0.52 while for EPS it is of a low degree at 0.11. It is interesting in the light that the Pre merger profitability did not have a statistically significant relation with the post merger profitability. The analysis of Profit Margin and Profit Rate show significant improvement in the financial and operating efficiency. The post-merger Profit Margin increased by 1505.96 percent, while the post merger Profit Rate increased by 189.21 percent. Hence the merger did positively affect the financials of SAIL and there were also benefits in terms of greater size and production capabilities.

The pre merger figures of **Indian Chrome Charge Limited (ICCL)** show that the company was running into losses since 2001 but the volume of losses had considerable come down till 2005 to -1.42 percent. The test of Hypotheses reveals that the Profitability and ICR of ICCL had a relation with the post merger figures of IMFA only in the longer run. The FATR of ICCL had a statistically significant relation with the FATR of IMFA both in the shorter and longer run. The two variables had a very high degree of positive correlation at 0.91. The positive effect that the merger had on the operational efficiency was obvious. Even the EPS of ICCL had statistically significant relation with that of IMFA both in the short and long run. The degree of correlation was high at 0.89. The merger seemed to fulfil its objectives of financial and operating synergy.

Indian Metals and Ferro Alloys (IMFA) was a steady and profitable enterprise with the company managing to earn profits over ten years that is from 2000 to 2009 at a satisfactory and steady rate. The profitability rate seemed to be picking after the initial slowdown just after the merger. The Hypotheses testing reveals that there is a statistically significant relation between the Pre and post merger FATR of IMFA having a moderate degree of positive correlation at 0.62. The relation between the Pre and Post Profitability, ICR and EPS is statistically insignificant. The Profit Margin after the merger shows an increase of 120 percent while the Profit Rate registered an increase of 66.67. Hence the merger appeared to have accrued financial and operating synergies after the merger in these terms.

Bellary Steel's historical performance was dismal with losses being incurred since 2001 and they seemed to just magnify after the merger and increased manifold over time. The study of Hypotheses reveals that the Pre merger Profitability, FATR and

ICR did not have a statistically significant relation with the post merger figures. The ICR in the short run was though affected having a high degree of positive correlation. However both in the pre merger and post merger stage there is a statistically significant relation between the Profitability and MPS. In the pre merger stage the degree of correlation is low at 0.03 while the degree of correlation is high at 0.77. Post merger the Profitability is affected by 31.19 units while intercept is high at 364.51 units. In case of MPS it is affected by just 0.019 units due to a unit change in profitability. The Pre merger MPS and EPS also do not seem to have a relation with the post merger statistic. Hence individually the MPS or EPS are not affected by merger

The financials for **Pittsburgh Iron and Steel Limited** was in a bad state with losses being incurred at a consistent basis. The test of Hypothesis reveals that the profitability of Pittsburgh had an impact on the profitability of Bellary while there was no effect on the EPS and FATR. The Profit Margin and Profit Rate for both the entities also did not pose a satisfactory picture. To sum up the merger was not going anywhere and both the units individually as well as jointly were making no headway. The decision of promoters to foray into the business of Steel by merging with Bellary Steel was questionable with the latter suffering from losses.

The analysis of **Southern Iron and Steel Company Limited (SISCOL)** reveals that the losses were converted into profits in 2004 and the two undertakings were subsequently merged in 2008 and SISCOL got benefit of with the help of core competencies of JSW. The Hypothesis testing reveals that the pre merger Profitability and ICR of SISCOL did not have an impact on the post merger Profitability and ICR of SISCOL. The post merger ICR of JSW had a relation with the pre merger ICR of SISCOL when five years of pre merger and three years of post merger were undertaken. However the study of the Pre merger EPS of SISCOL and Post merger EPS of JSW Steel appear to have a relation revealing that the shareholders were affected. The degree of correlation is a high degree of positive correlation at 0.86. Thus it is seen that the association with JSW Steel had converted a loss making unit into a profitable venture.

After running into losses for years **JSW Steel** finally made a turnaround in its operations in 2004 and started making profits on a consistent basis. There is no relation between the Pre and Post merger profitability on the basis of the test applied.

However the benefits of merger are not expected to accrue in the first few years. The analysis of the relation between the profitability and MPS reveals that the relation between the Pre merger profitability and MPS is insignificant. The relation between the post merger Profitability and MPS is on the contrary found to be significant with the correlation coefficient (r) high at 0.71. The value of Profitability is affected by 0.098 units for a unit change in MPS while the MPS is affected by 49.84 units for a change of a unit in Profitability. The intercept is also high at 238.75. The relation between the Pre merger EPS and MPS with the post merger EPS and MPS is also found to be significant only in the longer run. The Profit Margin for JSW Steel jumped by 635 percent and for Profit Rate the change was about 74.6 percent. The losses incurred prior to 2004 are also responsible for this huge change in Profit Margin.

The Cross-Border Mergers and Acquisitions (M&A's) undertaken for the study are as follows. The financials of **NatSteel** show that the company was running into profits prior to the merger but after the merger took place in 2005 there was a significant increase in the rate of profits indicating that the sale of its steel division was proving to be profitable for the enterprise. The testing of various Hypotheses shows that the relation between the Pre and Post merger FATR and WCTR is significant while the one between the pre and post merger profitability is insignificant. In case of FATR the correlation coefficient (r) is moderate at 0.38 while for WCTR it is high at 0.76. The testing of Hypothesis to determine the relation between the profitability and MPS before and after the merger is interesting. The relation between the Profitability and MPS prior to the merger is statistically insignificant while the relation between the Profitability and MPS after the merger is statistically significant. The degree of correlation is low at 0.24. the Profitability is moved by 8.84 units for a unit change in MPS while the MPS is affected by 0.062 units for a units change in EPS. In case of EPS the relation between the Pre and post merger figures is insignificant while in case of MPS the pre and post merger data are statistically significant. However there is a negative correlation between the two at -0.55.

Tata Steel earned profits on a steady basis over the last decade. The merger had an impact on the profitability of the entity with a moderate degree of correlation at 0.45. The FATR and ICR were however unaffected and were statistically insignificant. The relation between the MPS and Profitability shows that both the variables had a statistically significant relation both before and after the merger. However the degree of correlation fell from a high degree at 0.86 to a moderate degree of negative correlation at 0.41. The post merger MPS was affected by -140.41 units for a unit change in Profitability. The intercept was very high at 3407.39. Also the Pre merger MPS and EPS had a relation with the Post merger MPS and EPS respectively. The degree of correlation between the Pre and Post merger MPS is again negative at -0.62. The Profit Margin for both NatSteel and Tata Steel increased significantly. The Profit Margin for Tata Steel increased significantly by 491.67 percent indicating a marked improvement in the operating efficiency as compared to a 158.54 percent increase in profits

From 2000 to 2003 **Corus** was registering losses and it was only in 2004 that Corus earned profits. However the rate of profits from 2004 to 2006 was in the range of 2 percent to 5 percent which was not very high. The test of hypothesis shows that the Profitability and FATR prior to the merger had a relation with that of the post merger Profitability and FATR respectively of Tata Steel. While Profitability had a negative correlation at -0.57, the FATR had a positive correlation with the post merger figure at 0.27. The ICR was affected only in the longer run. Pre merger EPS had a very high degree of positive correlation with the post merger EPS at 0.90 indicating the benefits accrued to the shareholders.

The much hyped acquisition of Corus by **Tata Steel** reflected that the trend of profitability for Tata Steel continued. The merger had no effect on the figures of Profitability, FATR or ICR as depicted by the test of Hypothesis. The relation between the Pre and Post merger figures is statistically insignificant. The relation between the MPS and Profitability before and after the merger is most interesting. Prior to the merger MPS and profitability had a statistically significant relation with a high degree of positive correlation at 0.93. However after the merger there is a high degree of negative correlation at -0.96 indicating that the merger did not go down very well with the shareholders as per the market response. The MPS was affected by -1584.93 units for a unit change in Profitability with a very high intercept at 34175.36. The EPS was affected by the merger only in the longer run while the merger seemed to have no effect on post merger MPS. It is further seen that the Profit Margin for Tata Steel increased by 77.5 percent while the operational efficiency got a major boost with the Profit Rate moving up by 252.4 percent

The Profitability of **Algoma Steel** was impressive before the merger. Though after the merger it dropped, it was back on track in 2009 at 8.53 percent. The testing of hypotheses reveals that FATR was affected as a result of the merger both in the small and long run while the profitability was affected in the small run. The degree of correlation was positive for FATR at 0.39 while negative for Profitability at -0.39. The ICR was however not affected.

Despite the huge losses incurred initially in the year 2001 and 2002, **Essar Steel** recovered and posted profits at a steady rate from 2003 onwards. The test of various hypotheses reveals that the merger did not have an effect on any of the parameters, i.e. Profitability, FATR, ICR or EPS. For Algoma Steel the Profit margin increased by 127.94 percent and the Profit rate fell by -25.23 percent. For Essar Steel both Profit Margin and Profit Rate increased substantially by 700 percent and 316.36 percent respectively.

The major **findings** of the study are discussed in the following paragraphs.

The trend of Mergers and Acquisitions (M&A's) has greatly benefitted from the opening up of the economy but it is only in the recent years that prominent outbound deals are being done.

The global Mergers and Acquisitions (M&A's) increased in terms of volume from 13 in 1991 to 319 in 2007 while the value increased from US$27 billion in 1991 to US$ 70.4 billion in 2007.

The opening of the economy has certainly gave an impetus to the trend of Mergers and Acquisitions (M&A's) in India but it has been only in the last decade that significant deals are being carved out as is evident from the volume and value of deals depicted in the thesis. Also a major proportion of FDI is contributed by Mergers and Acquisitions (M&A's) deals.

The major objective for Indian corporate for effecting a merger or takeover is related to financial synergies followed by increased operational base and reach to new markets. As per various figures, surveys and projections it is the BRIC countries which are expected to lead their contemporise as regards affecting a merger and acquisition deal. According to the 2010 Confidence Index by A.T Kearney India ranks third in the world behind only China and USA.

The ease in access and relatively cheaper rates of debt financing is facilitating a large number of Mergers and Acquisitions (M&A's) which is a major reason for the increased activity. A major factor which affected the Mergers and Acquisitions (M&A's) activity in the recent times is the global recession of 2007. In India the domestic deals fell by -46.73 percent in volume and cross border by -22.82 percent. Interestingly the value for domestic deals increased by 78.60 percent while for cross border deals it fell by -46.81 percent indicating the interest of the India Corporate Sector towards the domestic economy as a result of the recession. For the world economy the value of the deals fell by -34.71 percent in 2008 and 81.71 percent in 2009. The developing economy suffered the highest fall in deals due to recession by -96.72 percent.

For the global economy Pharmaceutical sector registered a growth of 167.82 percent and transport by 68.93 percent for the period 2008 to 2009. The sector having the most vibrant activity as regards Mergers and Acquisitions (M&A's) in India are telecommunication, Pharmaceutical and Steel. Among the companies involved in major deals in recent times are Tata, Ranbaxy Laboratories, Hindalco Industries. The acquisition of Corus by Tata Steel at US$ 12.2 is the largest ever cross border deal by an Indian Company.

Besides acquiring and merging with new firms, many steel firms are merging with their subsidiaries in a bid to consolidate and expand the production faculties. This is in sync with the global consolidation trend where companies are engaging in huge restructuring and consolidation. With fierce competition the key to survival is large scale production and benefiting from the related economies of scale. Recently major producers of steel that is Tata Steel, Essar Steel, JSW Steel, Jindal Steel, SAIL and IMFA have merged their subsidiaries to catapult as leading producers of steel

The merger with Visvesvaraya in 1999 was beneficial for both the companies as Visvesvaraya got a lease of life given the losses it was incurring and SAIL expanded its operating capacity and also could write off its profits against the losses. However the loss making Visvesvaraya Iron and Steel Limited did not have any positive impact whatsoever on the financials for SAIL.

In case of merger of SAIL with IISCO in 2006 it is seen that it was again a merger of a loss making subsidiary of SAIL with itself. The strategy was again to revive the loss making unit with the merging of its operations with a profitable unit like SAIL. In view of the global consolidation trend of consolidation in steel industry the merger was helpful as it expanded the operating capacity of SAIL besides providing it with reduced tax liability. Also it is seen that after the merger the Profitability and MPS had a statistically significant relationship. Also the merger is seen to have an effect on the MPS and EPS after the merger. The merger had a greater impact on the financial performance rather than the operating performance as is evident by the movement of the Profit Rate and Profit Margin.

The merger between IMFA and ICCL reflected positively on the operational and financial statistics of IMFA where the profitability of IMFA was affected in the longer run and the FATR of IMFA was affected both in the long and short run by the statistics of ICCL. Also the degree of correlation was high. The EPS of IMFA and ICCL also had a high positive correlation. The comparison between the pre and post merger figures of IMFA highlights that the merger did have a positive effect as regards Profitability, ICR, FATR and EPS. The Profit Margin and Profit Rate also increased leading to the conclusion that the operating efficiencies were enhanced more than the financial efficiencies due to the merger.

In case of the acquisition of Bellary Steel by Pittsburgh Iron and Steel the acquisition seemed to be going nowhere with the trend of losses continuing unabated after the merger for both the concerns involved. The Profit Margin and Profit Rate were dismal and the test of Hypothesis also reveals that the merger was proving to be a failure.

The acquisition of SISCOL by JSW steel proved to be a boon for SISCOL which benefitted from the core competencies of JSW and made a remarkable turnaround in operations and reported profits after the deal. It is seen that the post merger relation between MPS and Profitability is significant while the pre merger relation is not reflecting the positive impact the merger had on the MPS. The Profit Margin for JSW Steel jumped by 635 percent while Profit Rate increased by 74.6 percent. The losses incurred prior to 2004 are also responsible for this huge change in Profit Margin.

In case of NatSteel, after the merger took place in 2005 there was a significant increase in the rate of profits indicating that the sale of its steel division was proving to be profitable for the enterprise. Here again the profitability and MPS have significant relation before the merger and not after the merger. While as regards MPS the merger had a negative impact on it.

Tata Steel earned profits on a steady basis over the last decade. The merger had an impact on the profitability of the entity. The FATR and ICR were however unaffected and were statistically insignificant. The relation between the MPS and Profitability show sthat both the variables had a statistically significant relation both before and after the merger. Also the Pre merger MPS and EPS had a relation with the Post merger MPS and EPS respectively. The Profit Margin for both NatSteel and Tata Steel increased significantly. The Profit Margin for Tata Steel increased significantly by 491.67 percent indicating a marked improvement in the operating efficiency.

From 2000 to 2003 Corus was registering losses and it was only in 2004 that Corus earned profits. However the rate of profits till 2004 to 2006 was in the range of 2 percent to 5 percent which were not very high. The test of hypothesis shows that the Profitability and FATR of Tata Steel prior to the merger had a relation the post merger figures. While Profitability had a negative correlation the FATR had a positive correlation with the post merger figures. The ICR was affected only in the longer run. Pre merger EPS had a very high degree of positive correlation with the post merger EPS indicating the benefits accrued to the shareholders.

The much hyped acquisition of Corus by Tata Steel reflected that the trend of profitability for Tata Steel continued.teh merger had no effect on the figures of Profitability, FATR or ICR as depicted by the test of Hypothesis. The relation between the Pre and Post merger figures is statistically insignificant. The relation between the MPS and Profitability before and after the merger is most interesting. Prior to the merger MPS and profitability had a statistically significant relation with a high degree of positive correlation. However after the merger there is a high degree of negative correlation indicating that the merger did not go down very well with the shareholders as per the market response. The EPS was affected by the merger only in the longer run. It is further seen that the Profit Margin for Tata Steel increased by 77.5 percent while the operational efficiency got a major boost with the Profit Rate moving up by 252.4 percent

The Profitability of Algoma Steel was impressive before the merger. Though after the merger it dropped, it was back on track in 2009 at 8.53 percent. The testing of hypotheses reveals that FATR was affected as a result of the merger both in the small and long run while the profitability was affected in the small run only. The ICR was however not affected in either case.

Despite the huge losses incurred initially in the year 2001 and 2002, Essar Steel recovered and posted profits at a steady rate from 2003 onwards. The test of various hypotheses reveals that the merger did not have an effect on any of the parameters, i.e. Profitability, FATR or ICR. For Algoma Steel the Profit margin increased while the Profit rate fell. For Essar Steel both Profit Margin and Profit Rate increased substantially.

The **Suggestions and Recommendations** based on findings of the study are as follows

The selection of the target company should be done most extensively. Care should be taken to ensure that the target and acquirer should complement and supplement each other in resources. When structuring a merger or acquisition the main idea is to exploit the post-merger synergy. However it is most important to ensure that these are valued in the right earnest. Both over-valuation and undervaluation might prove detrimental to the interest of the acquiring company. The value of deals in the case of mergers and acquisitions in the recent years is running into billions. It affects the liquidity and capital structure of the company. The success of the deal has a bearing on the financial capabilities of the company. While finalizing a deal its impact on the financial position for several years to come should be considered deeply.

In the recent years there is a global trend of restructuring prevalent where Mergers and Acquisitions (M&A's) is proving to be a potent tool. However while taking a decision regarding a deal it is important to ensure that the acquisition move is not be solely based global trend but on individual assessment of the target company and other relevant details.

Besides considering the relevant details regarding the company it is also important to consider the macro environment as it has a deep and profound impact on the future of the deals. The timing of the merger or acquisition is one of the most important aspects of merger and acquisition deal. The perfect time may always not be when the market is in the state of boom. It might be profitable to target companies which have future prospects and purchase them while the valuations are low. In the case of listed companies the parameters involve the MPS of shares which to a large extent depends on market psyche and sentiment and how the investors respond to the announcement of the deal. It is important to ensure that the confidence of the investors is maintained for which disseminating information and not keeping them in the dark may prove to be an added advantage

In the case of foreign acquisitions the main idea is to capture advanced technology and an entry in a new market. However the core competencies of the Indian Steel producers lie in low cost and care should be taken to ensure that the resources are not pushed beyond a certain extent which might affect the cost advantage adversely in the longer run.

In the present global scenario the BRIC economies are making a considerable impact globally with their economic prowess. Besides concentrating on international markets, the Indian Steel Industry should undertake massive development of infrastructure and expansion in the domestic arena and other developing economies. Efforts should be made to keep a hold of the untapped domestic market which appears to have great potential in the near future. Even the world's largest steelmaker Arecelor-Mittal is looking to enter India through acquiring stake in Uttam Galva Steel. The recent trend of the Indian Steel Industry is towards consolidation and restructuring. The main idea is to increase the production capacity and gain from economies from large scale. The idea of merging or being acquired may be the hope for survival of small producers as the trend shows that there would be few big producers rather than many small producers.

The acquiring company should ensure that it does not involve or get muddled in rival bidding too deeply and end up paying more than what the acquiring company is valued. In the case of the high pitched Tata-Corus battle many industry experts feel that Tata might have ended paying a high price and the success of the acquisition is yet to be finally gauged. In the recent times the banking and financial industry has been flourishing at a remarkable pace. Their facilities in terms of loans should be judiciously used and should not be used to make unnecessary deals and create a debt burden which might be difficult to repay.

The acquiring and acquired commonly have to take care to bring about not only post merger financial and operating integration but also integration of the people involved in order to create a positive environment. Acquiring loss making subsidiaries might be a good incentive to reduce tax-liability and increase operating capacity but in a large scale industry it should be ensure that the practise does not lead to a big dent on the financial performance as maintaining balance is crucial.

The **General Suggestions and Recommendations** are as follows

The most important aspect of a merger or acquisition is facilitating smooth post merger integration. For the purpose various steps need to be accorded highest level of importance. It might be advisable to do so in phases in order to facilitate the complex process. Merger and Acquisition is a potent and most useful tool to expand the global presence. With major companies worldwide engaging in it fiercely it might become a necessity rather than just an option for growth. It is necessary for big and small companies to recognize and accept this trend and adjust their business strategies accordingly.

It is necessary to maintain balance in synergies and ensure that all aspects are given due importance and it does not lead to ignoring of one aspect for another. It might be advisable to study recent Mergers and Acquisitions (M&A's) in the same or related industries to develop an understanding of the same. However it cannot be solely relied upon and requires a detailed case by case study. The management of the company should be prepared to face new challenges and transform them into opportunities. A key aspect is innovation and creativity. The management should be prepared to accept changes and employ strategies keeping in mind the changed circumstances and ground realties rather than focus on just set conventions and rules. It might be advisable to develop core strategic teams which are professionally trained to facilitate a merger and acquisition integration.

It is imperative to maintain a policy of tolerance and cultural integration as it is necessary to sort out the human resource issue in the most amicable manner for post merger integration. The policy of employee retention is a sensitive aspect and care should be taken to maintain an environment where the focus is on efficiency and productivity and the workers are ably simulated and motivated to work in a new work environment after the merger.

The management should also keep contingency measures and back up plans intact. In case, the plans and strategies do not work out, risk management mechanism should be in place to address unforeseen circumstances.

The Researcher has made a sincere attempt to make a contribution to the existing literature regarding Mergers and Acquisitions (M&A's). The study aims to explore the effect of the merger on primarily the post-merger financial performance of the companies involved in the Merger and Acquisition (M&A's) activity. For the purpose the financials of both the acquired/merged and the acquiring/merging entities are taken into consideration. Though, Mergers and Acquisitions is a widely researched topic, the studies done on the post-merger performance are limited. The Indian Steel Sector is taken up for analysis which is experiencing vibrant activity in the past few years. Significant deals that have taken place both in the domestic and international scene are taken up for detailed analysis. The data is classified on the basis of pre-merger and post-merger activity and internal and external figures affecting the performance are accounted for. The effect of the profitability on the Market Price of Shares (MPS) and vice-versa is also explored.

The study aims to study the viability of the Mergers and Acquisitions (M&A's) undertaken in the Indian Steel Industry on the basis of the post-merger financial performance.

The Researcher has attempted to make a sincere attempt for making a worthy **contribution to the existing literature** regarding Mergers and Acquisitions (M&A's). The study aims to explore the effect of the merger on primarily the post-merger financial performance of the companies involved in the Merger and Acquisition (M&A's) activity. For the purpose the financials of both the acquired/merged and the acquiring/merging entities are taken into consideration. Though, Mergers and Acquisitions is a widely researched topic, the studies done on the post-merger performance are limited. The Indian Steel Sector is taken up for analysis which is experiencing vibrant activity in the past few years. Significant deals that have taken place both in the domestic and international scene are taken up for detailed analysis. The data is classified on the basis of pre-merger and post-merger activity and internal and external figures affecting the performance are accounted for. The effect of the profitability on the Market Price of Shares (MPS) and vice-versa is also explored.

The study aims to study the viability of the Mergers and Acquisitions (M&A's) undertaken in the Indian Steel Industry on the basis of the post-merger financial performance.

The Researcher suggests the following core areas for the purpose of future research related to the topic of Mergers and Acquisitions (M&A's)

i. The impact of the merger announcements on the share prices of the rival and bidding firms can be examined.

ii. In the present era Human Resources is a vital factor in determining the success or failure of the Mergers and Acquisitions (M&A's) and it is a qualitative aspect which is difficult to measure and quantify but has become extremely important in the present global economy where people and cultural cohesion is the key and especially in a cross border deal.

iii. Also in the wake of recent recession question marks are being raised about the valuations of deal done under depressed conditions where the target company is valued at a much lower price than it's worth.

iv. Another important aspect is the determining the rate of exchange of currencies which keeps on fluctuating until the negotiations materialize and a rise or fall may work in favor of one company while harm another in case of cross-border Mergers and Acquisitions (M&A's) . There is a need to design an appropriate model or mechanism for that.

A STUDY OF MERGERS AND ACQUISITIONS OF INDIAN STEEL INDUSTRY SINCE LIBERALIZATION

THESIS

SUBMITTED FOR THE AWARD OF THE DEGREE OF

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IN

COMMERCE

By

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Certificate

This is to certify that ***Mrs. Mariyam Mehtab*** has completed her thesis entitled, ***"A Study of Mergers and Acquisitions of Indian Steel Industry Since Liberalization"***, under my supervision. To the best of my knowledge and belief, the work is of original nature. It also fulfils the requirements for the submission of the Ph.D. thesis at the Aligarh Muslim University, Aligarh, India.

29/7/2010

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While striving to reach the goal,

All is not just about putting in the heart and soul.

There are those odds at which we might just give in,

Or be the survivor and fight till we win.

Life is a struggle with limited breathers,

But the company of loved ones makes the journey easier.

Although the path to achieve excellence does not have a destination,

I wish, I am able to prove myself in all the struggles.... that's for me the ultimate satisfaction.

I thank Almighty *Allah* for having showered His choicest blessings upon me and also giving me more than I have ever wished for. I pray for His mercifulness and blessings always.

I would first like to express the pride that I have in being a part of the prestigious institution, Aligarh Muslim University. This institution has given me knowledge, education and insight. It has also been greatly instrumental in making me what I am today as an individual both professionally and personally.

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Despite all the efforts to make the thesis free from error there may be still certain errors left unnoticed for which the Researcher takes all the responsibility personally.

Mariam
29/7/10

Mariyam Mehtab

Contents

Preface

The trend of Mergers and Acquisitions (M&A's) is not very new in the developed world where consolidations and restructuring has been taking place for quite some time. However, in India its pace picked up only after the New Economic Policy (NEP) was unveiled in July 1991. The Liberalization, Privatization and Globalization (LPG) measures led to large scale de-licensing and de-regulation. It ushered in a new era for the Indian economy which was finally an open economy amidst fears and apprehensions that the domestic industrialists would not be able to survive the foreign onslaught. Contrary to the fears the Indian Economy has today made its presence felt globally and is no longer a soft target for foreign acquirers. In fact, major cross border deals are being affected by Indian business houses in different parts of the world.

Mergers and Acquisitions (M&A's) have become a popular and significant tool in the hands of business houses for corporate restructuring. In the last decade there has been a trend of consolidation where even big business houses are looking for an alliance in order to expand, kill competition, acquire technological competence, and gain entry in newer markets or for other strategic reasons. Deals worth billions are being announced now and then and making news. It appears that a Mergers and Acquisitions (M&A's) deal is structured for sure shot success. However there is more than what meets the eye. The companies which go in for this strategy have a wide range of complex issues to address before and after the merger in order to ensure that all the aspects fall in place and the expected synergies are realised. It is a daunting task to select a target company and formalize the entire process of merger or acquisition but the bigger challenge is to ensure successful implementation of the strategy and integration of the units merged or acquired.

The Steel Industry of India was de-licensed and de-regulated in 1991 and 1992 respectively. Since then, it has come a long way to become the eighth largest steel producer in the world. There has been a steady increase in the demand for steel from both domestic and international quarters and this is expected to grow with the growing focus on investment in infrastructure all over the world. There has been a remarkable rise in the export of steel also while shortages in the domestic market were sufficed by timely imports. Keeping in tune with the global trend of consolidation, the

Indian Steel Industry has also structured major Mergers and Acquisitions (M&A's) both in the domestic and international sector.

Steel Authority of India Limited (SAIL), a government owned undertaking has been merging its loss making subsidiaries and expanding its production capabilities. Other major players like JSW Steel, Indian Metals and Ferro Alloys (IMFA) and Essar Steel have also been involved in major restructuring. It is worthwhile to mention that Tata Steel is on a global acquisition spree where it acquired Thailand based Millennium Steel and Singapore based NatSteel. However the biggest acquisition was its acquisition of the Europe based Corus for approximately US$ 12.2 billion which was the largest ever cross border deal by an Indian Corporate.

It is necessary to examine and study these deals in depth in order to develop an understanding of the financial viability of these deals and also to examine as to what are the effects of the merger or acquisition on the performance of the company. For the purpose, the Researcher has taken up five domestic and three cross border deals in the Indian Steel Industry and has analysed various financial issues related to them. Various accounting and statistical measures have been employed to analyse the post merger performance of the companies involved for calculating the impact of the merger on the financial and operating performance. Problems faced in structuring Mergers and Acquisitions (M&A's) and strategies to counter them are also critically studied with illustrative examples. An honest attempt has been made by the Researcher to study the consolidation trend of Indian Steel Industry and to find out whether the post-merger results are creating the expected synergies in terms of financial and operating performance or not.

The present study is a novel effort which goes into the thread-bare details as regards Mergers and Acquisitions in Indian perspective. This would certainly contribute to the existing stock of knowledge on the subject matter.

Preview of the Thesis

The study entails a detailed study of worldwide mergers and acquisitions taking place in various sectors. An attempt has been made to cover all significant deals which have taken in various important sectors both in the domestic and international scene. Also the various issues relating to mergers and acquisitions are being investigated in detail. A separate section is devoted to study the impact of mergers and acquisitions

(M&A's) in the Steel sector predominantly. The study forays into the financial analysis to study the synergies and values that are created as a result of the merger. Various measures are employed for that purpose to discuss the financial and operating performance of the entities involved before and after the merger. The main idea is to assess the impact of the merger in terms of performance of the companies and find out if the effect has been positive or negative.

The main objectives this thesis deals with are enlisted as below:

i. Study the major Mergers and Acquisitions (M&A's) deals that have taken place globally and in India. Analysis of success of Mergers and Acquisitions (M&A's) as a tool of investment, expansion and growth.

ii. Sector-wise study of global and domestic Mergers and Acquisitions (M&A's) in terms of value of deals.

iii. Study the growth and development of Indian Steel Sector since 1991 and evaluate its financial performance in the last few years.

iv. Examine the Pre and Post merger financial reports to examine whether the Mergers and Acquisitions (M&A's) led to a profitable situation for the merging and the merged firms. For the purpose various accounting and statistical measures are used.

v. Investigate the reaction of the market to Mergers and Acquisitions (M&A's) by making a comparison of the movement of Market Price per Share (MPS) and Earning per Share (EPS) both before and after the deal.

vi. Analyze the relation between the movement of the Profitability and MPS before and after the merger to explore the reaction of the investors to a merger announcement.

vii. Calculate the effect of merger on financial and operating performance before and after the merger.

viii. Detailed introspection of the motives and success rate of major Mergers and Acquisitions (M&A's) deals that have taken place in the Steel Sector as a part of corporate structuring both globally and at the domestic level. In the thesis a detailed analysis is made of the same to analyze the motives and success of these Mergers and Acquisitions (M&A's).

The Hypotheses investigated in the study are listed below

1. Testing the relationship between Pre and Post Merger Profitability

   H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger Profitability

   H_α (Alternative Hypothesis) = There is a relation between the Pre and Post-merger Profitability

2. Testing the relationship between Pre and Post Merger Capital Employed Turnover Ratio (CETR) or Fixed Asset Turnover Ratio (FATR)

   H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger CETR or FATR

   H_α (Alternative Hypothesis) = There is a relation between the Pre and Post-merger CETR or FATR

3. Testing the relationship between Pre and Post Merger Interest Coverage Ratio (ICR)

   H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger ICR

   H_α (Alternative Hypothesis) = There is a relation between the Pre and Post-merger ICR

4. Testing the relationship between Pre Merger Profitability and Pre Merger Market Price per Share (MPS)

   H_0 (Null Hypothesis) = There is no relation between the Pre-merger Profitability and MPS

   H_α (Alternative Hypothesis) = There is a relation between the Pre-merger Profitability and MPS

5. Testing the relationship between Post Merger Profitability and Market Price per Share (MPS)

   H_0 (Null Hypothesis) = There is no relation between the Post-merger Profitability and MPS

   H_α (Alternative Hypothesis) = There is a relation between the Post-merger Profitability and MPS

6. Testing the relation between Pre Merger Market Price per Share (MPS) and Post Merger Market Price per Share (MPS)

   H_0 (Null Hypothesis) = There is no relation between the Pre Merger MPS and Post-merger MPS

   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger MPS and Post-merger MPS

7. Testing the relationship between Pre Merger Earnings per Share (EPS) and Post Merger Earnings per Share (EPS)
   H_0 (Null Hypothesis) = There is no relation between the Pre Merger EPS and Post-merger EPS
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger EPS and Post-merger EPS
8. Testing the relationship between the Pre and Post Merger Profit Margin
   H_0 (Null Hypothesis) = There is no effect of Merger on the Pre Merger and Post-merger Profit Margin
   H_α (Alternative Hypothesis) = There is an effect of Merger on the Pre Merger and Post-merger Profit Margin
9. Testing the relationship between the Pre and Post Merger Profit Rate
   H_0 (Null Hypothesis) = = There is no effect of Merger on the Pre Merger and Post-merger Profit Rate
   H_α (Alternative Hypothesis) = There is an effect of Merger on the Pre Merger and Post-merger Profit Rate

The First Chapter provides a synoptic view of the Mergers and Acquisitions (M&A's) and gives a brief perspective and sheds light on the concepts related to the same. It gives a brief introduction of the global and domestic scenario relating to Mergers and Acquisitions (M&A's). It discusses the statement of the problem and issues and goes on to highlight the utility and importance of the study. It also mentions the limitations related to the study.

The Second Chapter discusses the legal perspective relating to Mergers and Acquisitions (M&A's) in India and is followed by a detailed discussion of the relevant provisions of various Acts applicable to the same in India. It is followed by a bird's eye view of the procedure generally followed for effecting a Mergers and Acquisitions (M&A's) in India.

The Third Chapter gives a purview of the motivation for mergers and acquisitions in India and discusses the environment for the same in India since 1991. The growth of Indian economy as an investment destination and as an acquirer in Mergers and Acquisitions (M&A's) is further elucidated. It is followed by an elaborate discussion of the Mergers and Acquisitions (M&A's) in various sectors in India. The impact of recession on the activity of deals if also highlighted.

The Fourth Chapter provides an insight into the Global Mergers and Acquisitions (M&A's) and also outlines the motivations for affecting a cross border deal. It is followed by a sector-wide description of major Mergers and Acquisitions (M&A's) that have taken place across various sectors. The impact of recession on the scenario of global merger and acquisitions is further discussed. A brief description of future global prospects as relating to Mergers and Acquisitions (M&A's) are also highlighted.

The Fifth chapter reviews a wide and extensive literature relating to Mergers and Acquisitions (M&A's) and provides a critical review of the same in chronological order. The research gap as traced by the research scholar in the process is outlined as well.

The Sixth chapter deals with the Research Design and Methodology and entails a description of the scope of the study. A brief discussion on the sample size and period of study is followed by a discussion of the objectives and hypotheses formulated for the study. An insight to various statistical and accounting methods used for evaluation of data is provided. The limitations involving the same are also discussed.

The Seventh Chapter deals with the Indian Steel Industry and traces its growth and development and provides an overview of the same. It is followed by a discussion of the major Mergers and Acquisitions (M&A's) in the Indian Steel Industry.

The Eighth Chapter involves an in-depth analysis of five major domestic Mergers and Acquisitions (M&A's) in the Indian Steel Industry which involve the merger of SAIL with Visvesvaraya Iron and Steel. The merger of SAIL with IISCO is analyzed next. It is followed by the study of the merger of Indian Chrome Charge Limited and Indian Metals and Ferro Alloys. The two takeovers analyzed involve the takeover by Bellary Steel by Pittsburgh and SISCOL by JSW Steel.

The Ninth Chapter analyses three major cross border takeovers which involve the takeover by Tata Steel of NatSteel and Corus and Algoma Steel by Essar Steel.

The Tenth chapter gives a brief overview of the present Mergers and Acquisitions (M&A's). It then enlists the various problems faced in fostering and planning a deal. It further discusses the strategies offered to counter the problems and in the end discusses the future prospects for Mergers and Acquisitions (M&A's).

The last and final Chapter provides the findings and sums up the work. In the end the Researcher suggests directions for future research.

List of Tables

Chapter 1: *A Synoptic View on Mergers and Acquisitions (M&A's)*

Chapter 2: *Business Environment for Mergers and Acquisitions (M&A's) in India*

Chapter 3: *Mergers and Acquisitions (M&A's) in India*

Chapter 4: *International Mergers and Acquisitions (M&A's): An Insight*

Chapter 6: *Research Design and Methodology*

Chapter 7: *Steel Industry in India since Economic Liberalization*

Chapter 8: *Analysis of Domestic Mergers and Acquisitions (M&A's) of Steel Industry in India*

Chapter 9: *Analysis of International Mergers and Acquisitions (M&A's): (Indian Steel Industry vis-a-vis International Steel Industry)*

Chapter 10: *Problems, Strategies, Implications and Prospects*

List of Figures

Chapter 1: *A Synoptic View on Mergers and Acquisitions (M&A's)*

Chapter 3: *Mergers and Acquisitions (M&A's) in India*

Chapter 4: *International Mergers and Acquisitions (M&A's): An Insight*

Chapter 7: *Steel Industry in India since Economic Liberalization*

Chapter 8: *Analysis of Domestic Mergers and Acquisitions (M&A's) of Steel Industry in India*

Chapter 9: *Analysis Of International Mergers and Acquisitions (M&A's): (Indian Steel Industry vis-a-vis International Steel Industry)*

Chapter 10: *Problems, Strategies, Implications and Prospects*

List of Abbreviations/Acronyms

ADR	American Depository Receipts
AFTA	ASEAN Free Trade Area
ASEAN	Association of Southeast Asian Nations
BCG	Boston Consulting group
BIFR	Board for Industrial and Financial Reconstruction
BRIC	Brazil Russia India China
BSE	Bombay Stock Exchange
CA	Current Assets
CETR	Capital Employed Turnover Ratio
CL	Current Liabilities
CR	Current Ratio
COS	Cost of Sales
DER	Debt Equity Ratio
EBIT	Earnings Before Interest and Tax
EPS	Earnings per Share
EPZ	Economic Processing Zone
EU	European Union
FATR	Fixed Assets Turnover Ratio
FDI	Foreign Direct Investment
FEMA	The Foreign Exchange Management Act
FERA	The Foreign Exchange Regulation Act
FICCI	Federation of Indian Chambers of Commerce and Industry
FII	Foreign Institutional Investment
GDR	Global Depository Receipts
ICCR	Indian Charge Chrome Limited
ICR	Interest Coverage Ratio
IISCO	Indian Iron and Steel Company Limited
IMFA	Indian Metals and Ferro Alloys
IPO	Initial Public Offering
IRDA	The Industries (Development and Regulation) Act,
IT	Information Technology
J&J	Johnson and Johnson
JPC	Joint Planning Committee
JVSL	Jindal Vijayanagar Steel Limited
LPG	Liberalization Privatization Globalization
M&A's	Mergers and Acquisitions
M & M	Mahindra and Mahindra
MPS	Market Price per Share

MRTP	Monopolies and Restrictive Trade Practices
NAFTA	North American Free Trade Agreement
NEP	New Economic Policy
NISM	National Iron and Steel Mills
NA	Not Available
ND	Not Disclosed
NP	Net Profit
NS	Net Sales
NSE	National Stock Exchange
NYSE	New York Stock Exchange
ONGC	Oil and Natural Gas Corporation of India
PAT	Profit After Tax
PBT	Profit Before Tax
PE	Price Earning (Ratio)
PHB	Privately Held Business
r	Correlation Coefficient
r^2	Coefficient of Determination
RBI	Reserve Bank of India
ROCE	Return On Capital Employed
RONW	Return On Net Worth
RPS	Return Per Share
Rs	Rupees
S$	Singapore Dollar
£	Pound
SAARC	South Asian Association for Regional Cooperation
SAIL	Steel Authority of India Limited
SEBI	Securities and Exchange Board of India
SISCOL	Southern Iron and Steel Company Limited
t	Student T-Test
TA	Total Assets
TMT	Telco Tech Media
TNC	Trans National Corporation
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
USA	United States of America
VISL	Visvesvaraya Iron and Steel Limited
WCTR	Working Capital Turnover Ratio
WIR	World Investment Report

Section-A

Background Perspective on Mergers and Acquisitions (M&A's) (Global and Indian Scenario)

Chapter 1

A Synoptic View on Mergers and Acquisitions (M&A's)

Chapter 1

A Synoptic View on Mergers and Acquisitions (M&A's)

1.1 Introduction

This chapter presents a glimpse of the present global scenario as regards investment, growth and development. Mergers and Acquisitions (M&A's) as a tool and mode for investment and growth is discussed at length. The concepts and terminologies associated with Mergers and Acquisitions (M&A's) are examined by the Researcher. The global and domestic scenario for mergers and acquisitions is further examined in detail.

1.2 Mergers and Acquisitions (M&A's): A Perspective

The present world scenario is such that it is the economic prowess of a country which tends to determine its standing in the world order rather than its military power. The boundaries are disappearing and the flow of goods, services, technology, capital, labor, etc is easier and hassle free comparatively than it was ever before. The production centers are no longer localized with the emergence of transnational corporations which have got productions centers sprawled all over the world. Foreign investment plays a pivotal role in the development process as it provides the much needed capital influx especially in developing countries. Accordingly the domain of the policies have also shifted from the national to international arena as the issues to be regulated are no longer confined within the domestic boundaries.

In the past decade it has been observed that a major reason for the sharp increase in the volume of international production and Foreign Direct Investment (FDI) is Mergers and Acquisitions (M&A's). It is now a preferred mode of entry for starting a business over Greenfield investment. In contrast to M&A's that took place in the 1980's for short-term financial gains, the mergers which are taking place in the present era are mainly motivated by strategic and economic gains in the longer run.

The comparison of value of deals involving FDI flows and M&A's is a complex affair due to the issues related to mode of financing involved in M&A's and the balance of payment methodology which is used in calculating FDI flows[1].

In the recent past the world has witnessed a dramatic spate of increase in the rate of increase of Mergers and Acquisitions (M&A's) leading to major restructuring of corporate structure and also the globalization of Industry. It has become an important and vital mode for expansion, eliminating competition, making forays into new markets, creating synergies, improve economies of scale, expand profitability and a host of various other reasons. It has become a preferred mode of investment over Greenfield investment which involves investing in an area where no previous facilities exist. The primary concept involved in Mergers and Acquisitions (M&A's) is that it is done primarily with the intention of combining two firms in order to create synergy and shareholder value. Before going in detail it is imperative to explore the various concept and terms related to merger and acquisition.

1.3 Concept: Mergers and Acquisitions (M&A's)

The term **merger** generally refers to the combination of two companies into one larger company. A 'pure merger' is said to occur when two companies which are generally of the same size pool their resources to form a new company. The merged companies lose their identity and they no longer operate individually. This is generally referred to as 'the 'merger of equals'. However a merger of this kind may not take place in practice and yet it may be named so, with the objective of satisfying and benefitting from various legal and taxation provisions and also to make the merger appear more palatable and pleasant. It is generally observed that mergers are voluntary and involve stock swap or cash payment to the minor.

A merger can be further classified into various types which are mentioned below:

Horizontal merger: It refers to a merger between two firms which are in the same line or industry producing identical products. Also the companies are generally competitors and cater to the same market. It is carried out for enhancing economies of scale, scope and stocks. For example the merger between Pfizer and Warner-Lambert which was affected in the year 2000 was a horizontal merger that took place between two pharmaceutical companies[2].

Vertical Merger: This type of merger is said to occur when two firms which deal in the same product at different stages of production merge. Thus, the firms basically produce different goods or service for the purpose of producing a common finished product. A major advantage of suck kind of merger is to reduce dependence on suppliers and also improve profitability. Standard quality of inputs, timely supply and control over production process is ensured. For example, the merger between Time Warner Incorporated, a major cable operation and the Turner Corporation which produces CNN, TBS and other programming in the year 1996[3].

Congeneric Merger: It refers to a merger between two firms which exist in the same industry but do not have a mutual buyer-supplier relationship. For example a merger between a bank and a leasing company. In this kind of merger it is generally seen that companies tend to share common distribution channels. Post-merger synergies are created which are expected to benefit both the entities. Citigroup's acquisition of Traveler's acquisition is a merger of such kind where both firms were involved in the financial services industry. However the product line and services offered by them were different from each other[4].

Conglomerate Merger: These are the kind of mergers between firms which deal in businesses which are totally not related to each other. A **conglomerate merger** is officially defined as being "*any merger that is not horizontal or vertical; in general, it is the combination of firms in different industries or firms operating in different geographic areas*"[5]. One example of a conglomerate merger was the merger between the Walt Disney Company and the American Broadcasting Company [6] [7].There are two kinds of Conglomerate mergers; pure and mixed. Pure conglomerate merger relates to merger between firms which do not have anything in common while in the case of a mixed conglomerate merger a product extension or market extension is involved. A merger of this kind is done to benefit from entry into new markets or expansion of product lines and gain from the synergies to be created. However these mergers are of a complex kind and need to be executed smoothly as if the conglomerate becomes too large as a result of the merger or acquisition it might create problems for the management and the resultant firm might run into losses.

Acquisition or takeover on the other hand may be hostile or friendly and is generally said to occur when a firm takes over the reins of another business house that is, it buys another firm. In case of hostile takeovers the acquired firm is unwilling and against the proposed acquisition or the board and management is unaware of the impending acquisition. Friendly acquisitions are said to take place when negotiations are entered between the target and bidding firms before the acquisition actually takes place. The firm that is taken over or acquired loses its identity completely and becomes a subsidiary of the acquiring firm.

Generally a stronger and more powerful firm or entity acquires a small business, but it may be so that a smaller business takes over or acquires a larger and older business house and keeps its name. This would be termed as reverse takeover

Basically the effect that the announcement has on the target firm's shareholders wealth, employee's terms, managerial team and board of directors determine whether the business deal is in the nature of merger or acquisition.

1.4 Global Scenario: Mergers and Acquisitions (M&A's)

In the recent times cross border acquisitions have accelerated at a brisk pace where firms are looking to consolidate and restructure in order to meet the challenges of the globalized world. Especially since the 1990's there has been an increasing popularity of Mergers and Acquisitions (M&A's) which is being preferred as a mode of investment over Greenfield Investment. The major reason behind it is the recent worldwide financial reforms which have eased trade barriers and promoted international mergers and acquisitions. This mode of expansion and growth is being increasingly used by various companies to increase their global share. Cross border deals provide various incentives in the form of access to newer markets, superior technologies, higher margins, cheaper raw materials and labor etc. It is the inherent desire of every undertaking to grow, develop and expand which is the major reason behind the increased deals. However, affecting a cross border deals is a complex affair and entails serious issues like cultural integration, changing laws and regulations etc. In order to carve out a successful deal various factors and determinants have to be intricately explored and studied for facilitating a successful merger or acquisition.

The Researcher has highlighted the Merger and Acquisition Scenario in major countries through various figures and statistics below to give a brief overview of the global scenario.

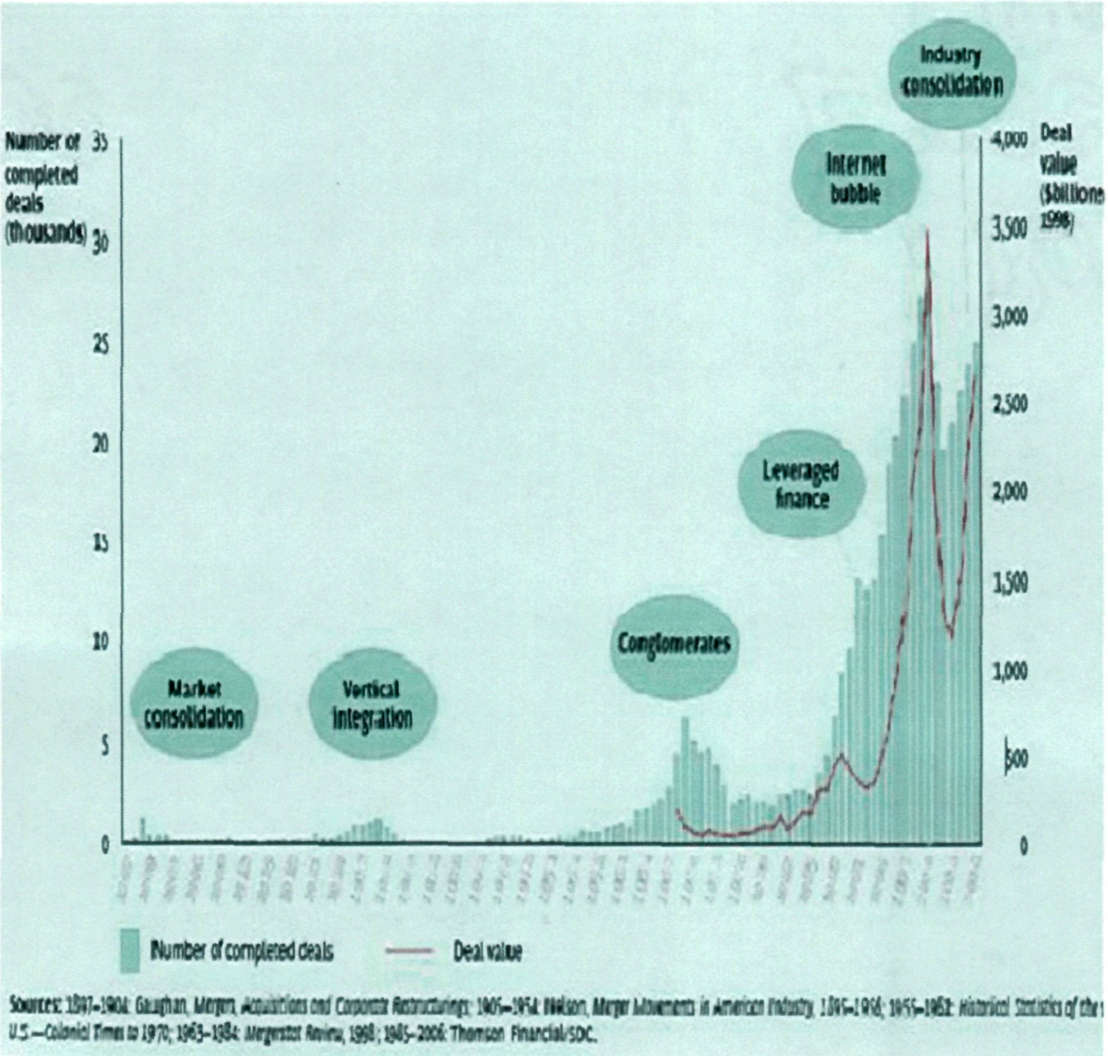
USA: According to the BCG Report which was released in July 2007[8] there have been six distinct waves of Mergers and Acquisitions (M&A's) in the USA since the 1990's and each of it was different from other in terms of features and characteristics.

As per the report, "*At the beginning of the twentieth century, there was a drive for market share, followed three decades later by a longer and more ambitious wave as companies connected together different elements of the value chain, from raw materials and production through to distribution. The most recent wave, which started in 2004, after the internet bubble at the turn of the century and the subsequent downturn, is driven by consolidation motives*".

From Figure 1.4.1 we can see the six distinct merger waves that took place in the USA. The **first wave** was marked by market consolidation where the number of deals was also very low. The number of deals was below 5000 while the value was lower than US$ 500 billion. In the **second wave** the number of deals went up and was marked by vertical integration, i.e. mergers between firms engaged in the similar kind of business but at different stages of production. However the number of deals and value of deals did not register significant change over the previous period. The **third wave** involved conglomerates that are mergers between totally unrelated businesses. Also the number of completed deals increased significantly in this period. The number of deals crossed the 5000 mark while the value of deals was between US$500 billion to US$1000 billion. The **fourth wave** was associated with leveraged finance where the number of deals increased tremendously, almost doubled. Leveraged finance is related to funding a company with a large proportion of debt and is considered a risky proposition. The present debt crisis has its roots in leverage. One can assume that the seeds which resulted in the present deep rooted credit crisis were sown almost a decade back. There was a significant jump in the number of deals and the value of deals that occurred in this period. Approximately 10000 to 15000 deals took place in this period. The value of deals on the other hand jumped up to US$ 1500 billion. The **fifth wave** was the period where the number of deals completed peaked to the maximum. During this time span the 'internet bubble took place which was a period when the stock markets in western nations surged dramatically due to rapid growth in the field relating to the internet sector. It was a speculative bubble roughly covering the period 1998-2001. The number of deals went above 30000 while the value of deals was around US$ 3500 billion. The **sixth** and final wave saw the number of completed deals decline marginally where the firms undertook consolidation in order to restructure, establish and regroup in order to face the enhanced competition. The number of deals dropped to around 25000 while the value of deals also went down to about US$ 3000 billion. Here we see that there has been a remarkable increase in the number and value of deals over the six waves highlighted in Figure 1.4.1.

This trend of increased mergers and acquisitions is due to various factors. The world economy underwent globalization and liberal regulations in terms of trade and commerce which hugely contributed to the increased number of deals.

Figure 1.4.1: Six Waves of Mergers and Acquisitions (M&A's) in USA since 1900's



Source: Cools, Kees "Research Report: The Brave new world of M&A – How to create value from Mergers and Acquisitions," The Boston Consulting Group, July 2007 Retrieved from http://209.83.147.85/publications/files/Brave_New_World_MA_Aug_2007.pdf (July 2007)

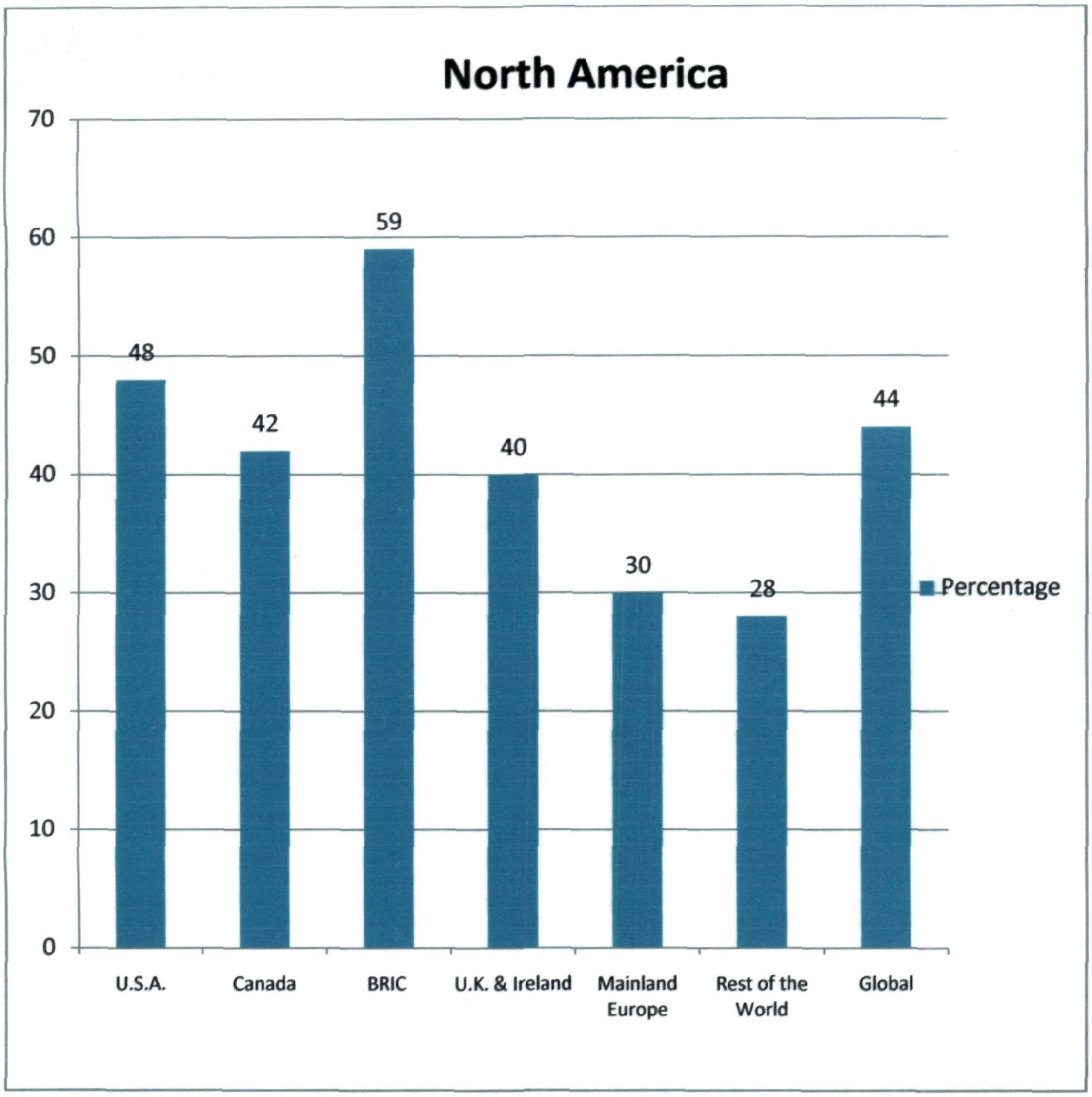
The Grant Thornton International Business Report has been analysed to study the Mergers and Acquisitions (M&A's) trend and future projections in various parts of the world. For the purpose 7800 PHB (Privately Held Business) from 34 economies of the world were undertaken[9]

Presently countries in North America are still eyeing acquisitions as a strategy to enter low cost markets in Asia to capitalize on the growing domestic competition. There is a growing interest among the entrepreneurs in USA to enter European market but contrary to the earlier trend where UK was used as a base, Continental Europe is now being used as a preferred destination. Cross border acquisitions in Canada are also on the rise with US continuing to be its main partner. The liquidity crisis leading to economic recession led to stringent economic and financial policies post 2007 but the market environment is still positive for the successful mid-market companies. The stocks became volatile and it made use borrowings for effecting deals a difficult option. However the crisis led to alternative modes of financing being employed in order to finance the deals like 'Equity Rollover' where the seller holds on to a certain percentage of equity in the target firm. Another mode employed is 'Seller Financing' through which the shortage of funds faced by the buyer is bridged. 'Earnout' is another tool for financing where a certain consideration is to be paid to the seller on the basis of the targets post-closing performance.[10]

Also the companies are eyeing major deals in Asia especially India and China which are registering promising growth rates and have huge unexplored economic potential. Deals in these countries are mainly aimed at lowering the cost of manufacturing by benefitting from the cheap labour services available there. At the same time USA continues to be an attractive merger and acquisition target for other countries due to its wide consumer base, conducive business and economic environment and advanced technologies. Being a saturated and developed market USA is not easy to enter and establish a base for the purpose of business. Mergers and acquisitions are being used as a mode of entry in this market by foreign companies.

In Figure 1.4.2 USA stands at the second highest number after BRIC in terms of percentage of respondents who are planning an acquisition in the next three years. Canada comes at third at 42percent. The percentage for United Kingdom and Ireland comes at 40percent while that for mainland Europe is lower at 30percent. For the Rest of the World the percentage is at 28percent. Hence the figure for North America is very much near the global percentage of 44percent.

Figure 1.4.2: Percentage of North American Respondents planning to grow through Acquisitions in the next three years compared to Regional Averages.



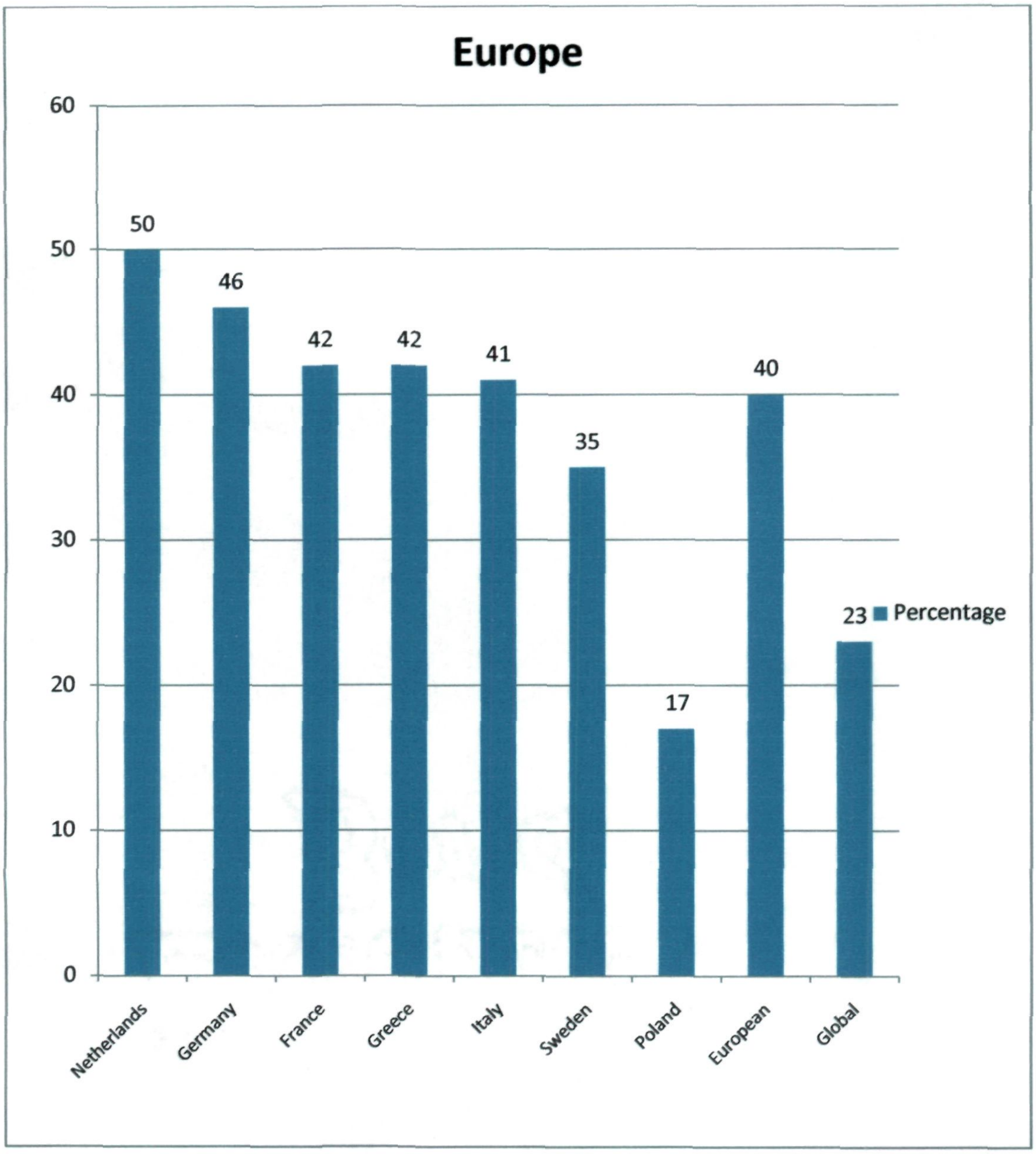
Source: Mergers and acquisitions: Opportunities for Global Growth; Grant Thornton International Business Report 2008. Retrieved from http://www.internationalbusinessreport.com/files/ibr_2008_ma_report_final.pdf

It is interesting note that the trend and waves relating to mergers and acquisitions in Europe was significantly different from the one that was seen in USA. The first wave was during the 1920s when mergers were mainly done to enhance the level of production. Its main aim was to benefit from the large scale economies. This wave resulted from the advancement in technological competence during this period. The second wave was experienced in 1960s which resulted due to the globalization of the European economy. During this period it was the large companies entering in to major deals which led to the notion that only large companies would be able to survive, sustain and compete in the world economy. In the following years this concept was subject to widespread criticism. The third boom was centred in UK during 1980's. In this period mergers and acquisitions were viewed and apprehended as a tool for corporate control, strategic management and company restructuring[11]. There has been increased interest in the European market by various companies in India[12].

The introduction of Europe Union in 1993 and a common currency Euro in 2002 led to uniformity in the legal and business framework in Europe which created a positive investment climate. The growth in the markets has increased the level of Mergers and Acquisitions (M&A's). In the past few years domestic markets in central and eastern Europe have grown at a rapid pace and the lower labour cost is fuelling the rate of mergers and acquisitions in this area. it is observed that the number of hostile deals in Europe is very low and the transparent legislative and economic framework has provided a major boost to the number and value of deals affected. The volume of deals is for the first time approaching that of American companies. However there is still a long way to go as the deals are majorly domestic and cross border deals have increased only in recent times. It is seen that 81percent of European deals are domestic and UK has the highest proportion of these domestic deals that is 89 percent[13]. The changes in regulations creates an environment of uncertainty and do not go very well with the investors. The financing of merger and acquisition deals in Europe suffered a major setback due to the global recession that hit the economy in 2007. The financial services sector of UK was boosted by the injection of liquidity and the takeover of some financially distressed institutions by the government.

Figure 1.4.3 shows that in terms of cross border deals the European countries at 40percent were much above the global percentage of 23percent. The breakings up of statistics show that the Netherlands seemed to be most aggressive at 50percent. It was followed by Germany at 46percent and France and Greece at 42percent each. Italy was next at 41percent while Sweden as lower down at 35percent. The percentage for Poland was the lowest at 17percent

Figure 1.4.3: Percentage of European Respondents anticipating an Acquisition who plan to grow through Cross Border Transactions in the next three years.



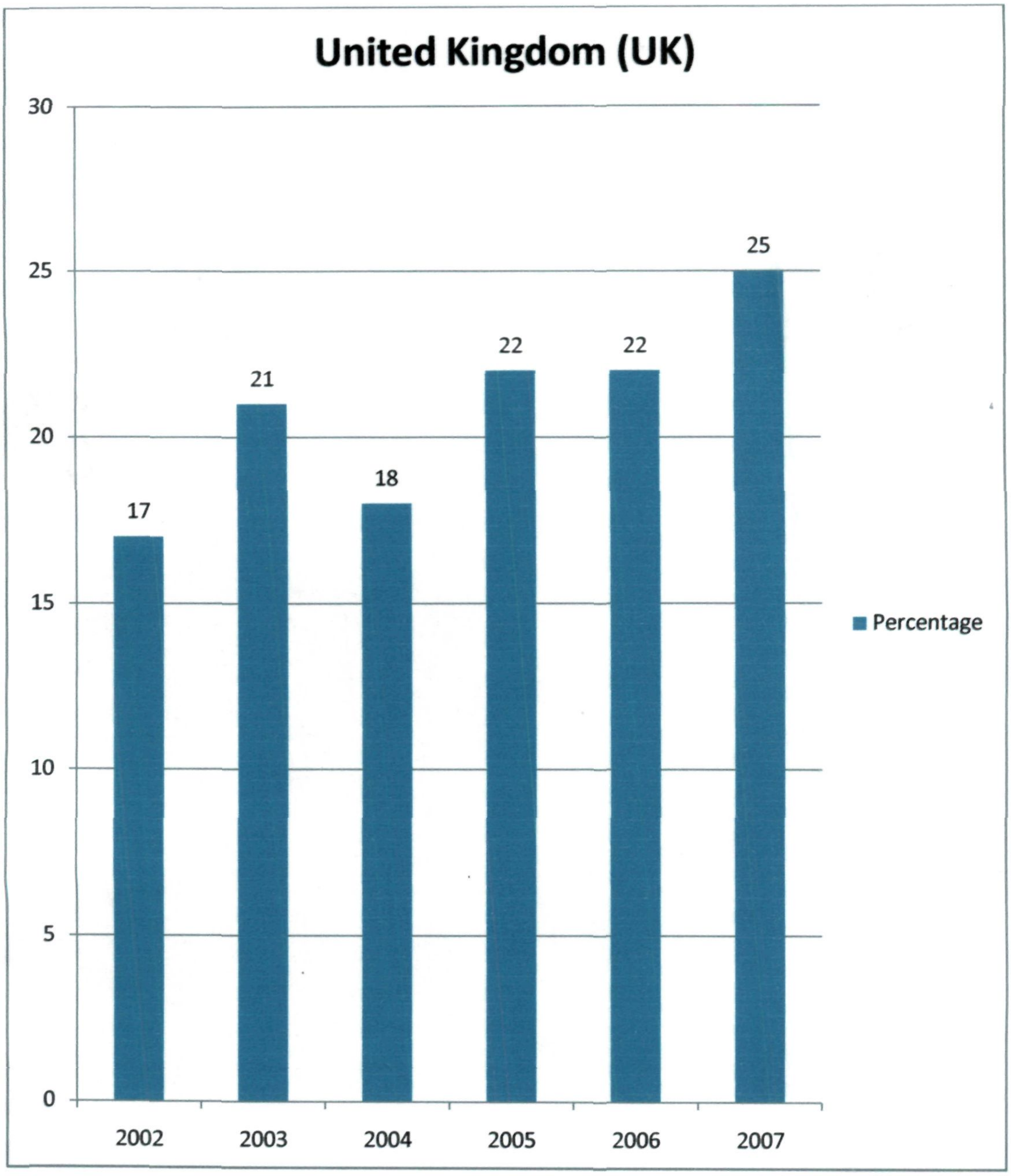
Source: Mergers and acquisitions: Opportunities for Global Growth; Grant Thornton International Business Report 2008. Retrieved from http://www.internationalbusinessreport.com/files/ibr_2008_ma_report_final.pdf

UK's privately held business has been intently focussing on cross border deals especially in the midmarket to benefit from the high growth with introduction of transparency in the legislation. Along with own funds, novel and innovative means of financing are being devised to finance the transactions in the absence of low cost debt. In view of the anticipated changes related to tax laws, a surge in M&A deals was seen in the first quarter of 2008 in order to complete the deal before these changes take effect. UK has had a market where investors have been confident to invest at a steady rate irrespective of the market conditions. Among the countries in European Union (EU), UK accounted for 56 percent of the cross border deals. Also in terms of the completed deals, UK accounted for 33 percent of all completed deals where 89 percent were domestic.[14]

The financial recession had a deep impact on the economic activity of UK as well. The major reason for the fall in the number and value of deals was the fall in availability of credit to finance transactions and loss of confidence of investors in the economy. The number of deals in the first half of 2009 fell by 42 percent from the first half of 2008 according to Thomson Reuters[15]. However, the future looks bright with KPMG Consulting predicting growth in merger and acquisition activity in 2010 in UK and globally. It further says that the technology would register the highest growth among the various sectors.[16] It is seen that the European Union companies are the most attractive target for UK companies followed by USA and Canada. Manufacturing companies in EU, USA and Canada are favoured by UK companies over those in Asia-Pacific region. In terms of service sector companies the trend is opposite where UK companies favour the companies in Asia-Pacific region over those in the EU, USA and Canada[17].

Figure 1.4.4 highlights the level of transactions in UK. It shows the trend of deals taking place in UK in the mid-market. In the year 2002 the number of deals valuing less than US$ 200 million stood at 17percent. It increased to 21 percent in 2003 while it fell to 18 percent in 2004. The percentage seems to be growing at a steady pace and stood at 25 percent in 2007 from the previous 22 percent in 2005 and 2007 reflecting the optimism in the market. The increasing trend is evident where the percentage is on the rise. The impact of global recession definitely had an impact on the number and value of deals that took place after 2007 though. In the future private equity and serial entrepreneurs are expected to be important drivers for fostering growth and expansion.

Figure 1.4.4: Percentage of UK Transactions (Deal value less than US$ 200m) involving Cross Border Acquirer or Target (Percent of Business)



Source: Mergers and acquisitions: Opportunities for Global Growth; Grant Thornton International Business Report 2008. Retrieved from http://www.internationalbusinessreport.com/files/ibr_2008_ma_report_final.pdf

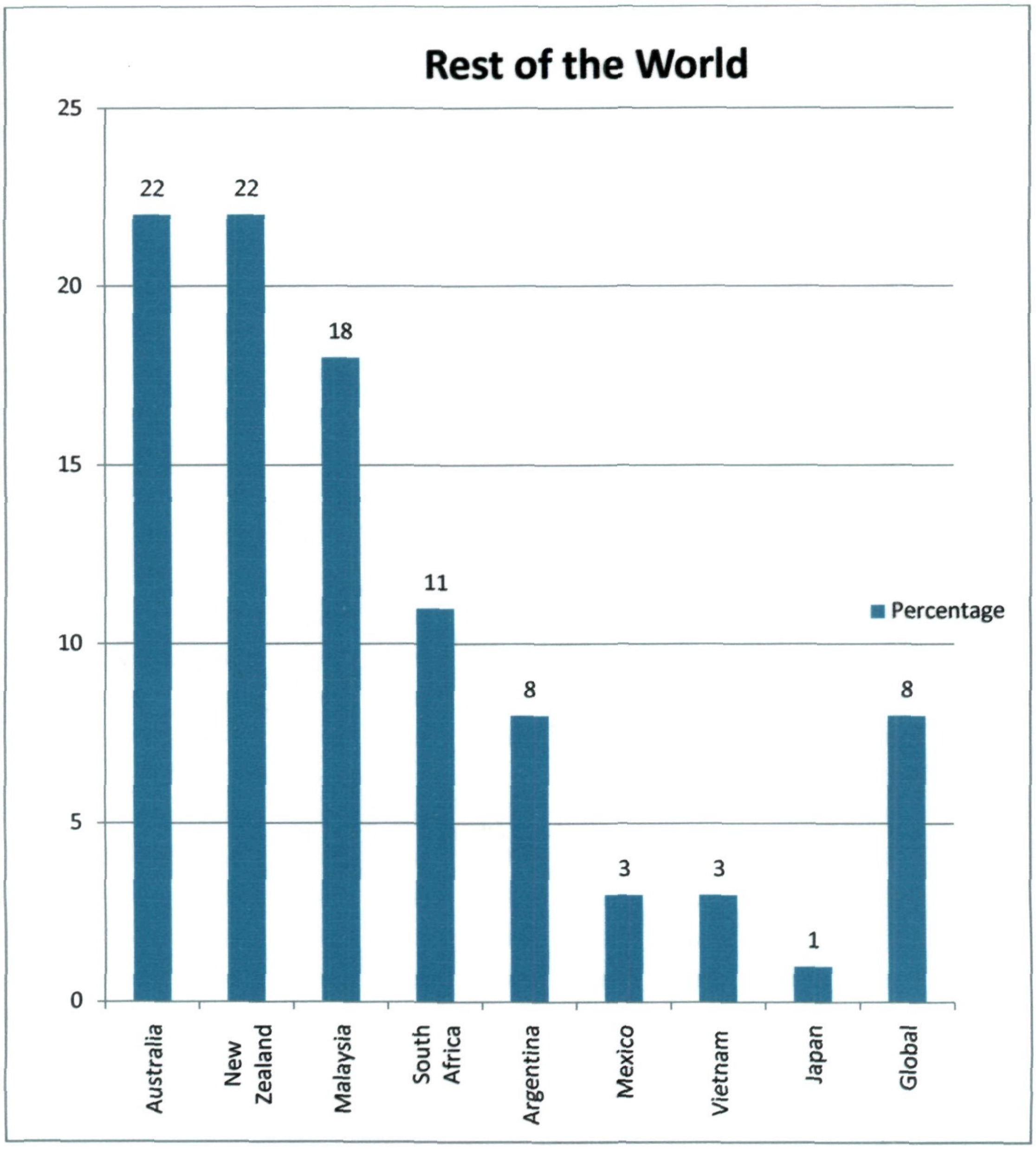
The past two decades have seen a sharp increase in the number of cross border mergers and acquisitions resulting from the various financial liberalization policies and trade agreements. This resulted in significant capital reallocation between countries. The motives for merger and acquisitions can be divided under the heads of efficiency and strategy. The efficiency motive aims at increasing the scale and scope of production and benefit from the economies created. On the other hand the motives related to strategy involve structural changes in the market which might have a positive impact on the operational and financial efficiencies of the companies involved. However it is generally seen that cross border mergers and acquisitions move in waves or clusters and are affected by the movement in the stock markets worldwide.[18] Another major determinant fuelling the growth of mergers and acquisitions is the growth of specialised financial and consultancy institutions which are highly competitive and provide the necessary strategic inputs to firms interested in carrying out a merger or acquisition deal.

In the past decade the year 2006 and 2007 witnessed the highest number of merger and acquisition deals in both developing and developed countries. A notable feature in this period was the increase in the number of private sector enterprises and the decrease in the number of public sector enterprise. The major reason behind it was the acquisition or merger of public sector enterprises by private enterprises[19].

With a wave of consolidation sweeping the world it is interesting to see the views of entrepreneurs in the Rest of the World who are planning to sell their business in order to foster partnerships and larger alliances. The increased demand from countries like India and China along with the changes in the medium term markets of these countries is leading to a scenario where these companies are willing to admit foreign companies as partners of change.[20]

Figure 1.4.5 highlights how the countries are willing to sell off their businesses in Australia and New Zealand where the percentage comes at 22 percent in a bid to expand and consolidate. Malaysia is third at 18percent followed by South Africa at 11percent and Argentina at 8 percent. The percentage for Mexico and Vietnam is low at 3 percent while that for Japan is the lowest at 1 percent while the global percentage comes at 8 percent. It reveals the trend of growth of mergers and acquisitions in various countries where this practice is gaining acceptance and mid-market companies are planning to grow through merger or acquisition.

Figure 1.4.5: Percentage of Respondents in Rest of the World planning to sell their Business in the next three years



Source: Mergers and acquisitions: Opportunities for Global Growth; Grant Thornton International Business Report 2008. Retrieved from http://www.internationalbusinessreport.com/files/ibr_2008_ma_report_final.pdf

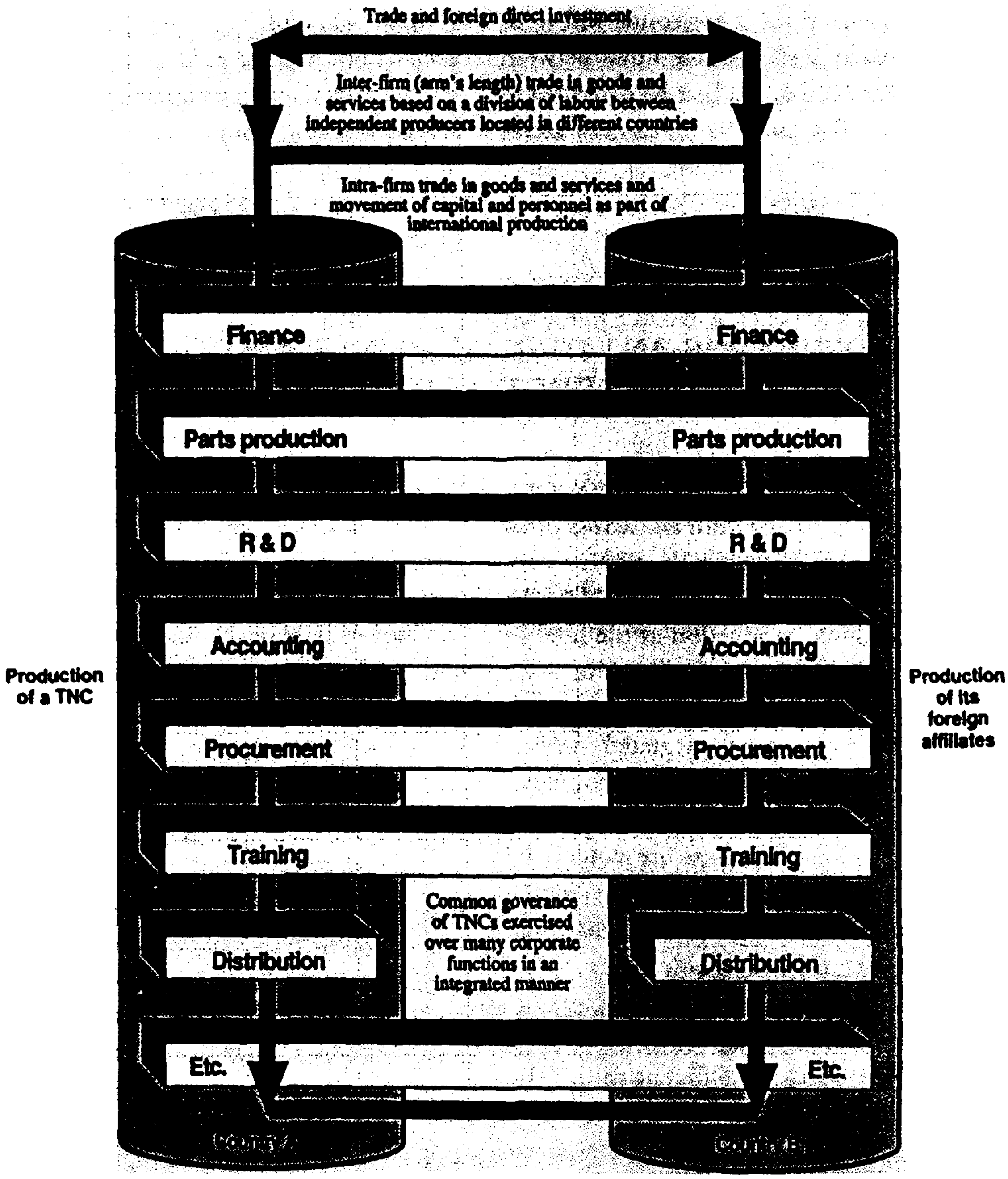
1.5 Indian Scenario: Mergers and Acquisitions (M&A's)

The Indian economy is firmly on a strong growth trajectory. The dynamic and vigorous democracy ably supported by its ambitious youth and newly emerging middle class has made it an economic powerhouse.

The Mergers and Acquisitions (M&A's) that took place in India are specially associated to the financial reforms which were initiated in the year 1991. These were mainly targeted at reforming the Indian economy. The economy was facing an adverse balance payment of crisis where the foreign exchange reserves were at an alarmingly low level. It was then that the government took certain measures aimed at Liberalization, Privatization and Globalization (LPG) of the Indian economy. A new era of reforms was ushered in, that heralded a new beginning for our economy which was previously a closed and regulated economy that did not permit FDIs and FIIs. The Indian economy underwent sweeping changes which greatly transformed its structure and form. 'Size and Competence' were the watchwords and all sectors of the economy were gearing up to face the foreign competition at both domestic and international levels. The businesses realized the importance of expansion and restructuring of enterprises. Am attempt was being made to enter new markets, increase scale of production, bring about innovations and newer technologies, improve existing products and introduce new products in order to face the competition and also survive the global onslaught. For the purpose Mergers and Acquisitions (M&A's) was recognized as one of the most effective and potent tool in the hand of the corporate sector for planning and implementing long-term business strategies. The last decade has seen a sizeable increase in the number of Mergers and Acquisitions (M&A's) that have taken place.[21]

Figure 1.5.1 is a pictorial representation of the integration that occurs between various functions as a result of the Mergers and Acquisitions (M&A's). The expected synergies accrue as a result of the successful integration of these functions which tend to complement. The Transnational Corporation (TNC) establishes its foreign affiliates in various countries and the subsidiaries and the apex unit are expected to complement each other's functional capabilities in the areas of finance, parts production, research and development, accounting, procurement, training, distribution etc. There are transactions related to trade and Foreign Direct Investment (FDI) between the two. Also inter-firm and intra-firm trade in goods and services is facilitated between the units situated in different countries

Figure 1.5.1: Deep Integration as a result of Functionally Integrated International Production by Transnational Corporations



Source: UNCTAD, Programme on Transnational Corporations, World Investment Report 1993: Transnational Corporations and Integrated International Production (United Nations publication, Sales No. #.93.II.A.14)

Table 1.5.1 reveals that improvement in revenues and profitability is the most important objective behind a M&A deal which accounts for 33 percent. Faster growth in scale and entry in new market is second most important at 28 percent. Newer technology acquisition is another important objective which stands at 22 percent. The next objective to eliminate competition and gain larger market share stands at 11 percent followed by the objective to reduce the tax burden which accounts for 3percent. The above discussion reveals that Mergers and Acquisitions (M&A's) is basically a mode of expansion and growth in order to sustain the increased competition.

Table 1.5.1: Objectives of Indian Corporate for Mergers and Acquisitions (M&A's)

Objective behind the M&A Transaction Responses	In percentage (%)
To improve Revenues and Profitability	33%
Faster growth in scale and quicker time to market	28%
Acquisition of new technology or competence	22%
To eliminate competition and increase market share	11%
Tax shields and Investment savings	3%

Source: Mantravadi, Pramod and Reddy, A. Vidyadhar (2008) "Post-Merger Performance of Acquiring Firms from Different Industries in India" International Research Journal of Finance and Economics ISSN 1450-2887 Issue 22

1.6 Scheme of Chapters

The First Chapter provides a synoptic view of the Mergers and Acquisitions (M&A's) and gives a brief perspective and sheds light on the concepts related to the same. It gives a brief introduction of the global and domestic scenario relating to Mergers and Acquisitions (M&A's). It discusses the statement of the problem and issues and goes on to highlight the utility and importance of the study. It also mentions the limitations related to the study.

The Second Chapter discusses the legal perspective relating to Mergers and Acquisitions (M&A's) in India and is followed by a detailed discussion of the relevant provisions of various Acts applicable to the same in India. It is followed by a bird's eye view of the procedure generally followed for effecting a Mergers and Acquisitions (M&A's) in India.

The Third Chapter gives a purview of the motivation for mergers and acquisitions in India and discusses the environment for the same in India since 1991. The growth of Indian economy as an investment destination and as an acquirer in Mergers and Acquisitions (M&A's) is further elucidated. It is followed by an elaborate discussion of the Mergers and Acquisitions (M&A's) in various sectors in India. The impact of recession on the activity of deals if also highlighted.

The Fourth Chapter provides an insight into the Global Mergers and Acquisitions (M&A's) and also outlines the motivations for affecting a cross border deal. It is followed by a sector-wide description of major Mergers and Acquisitions (M&A's) that have taken place across various sectors. The impact of recession on the scenario of global merger and acquisitions is further discussed. A brief description of future global prospects as relating to Mergers and Acquisitions (M&A's) are also highlighted.

The Fifth chapter reviews a wide and extensive literature relating to Mergers and Acquisitions (M&A's) and provides a critical review of the same in chronological order. The research gap as traced by the research scholar in the process is outlined as well.

The Sixth chapter deals with the Research Design and Methodology and entails a description of the scope of the study. A brief discussion on the sample size and period of study is followed by a discussion of the objectives and hypotheses formulated for the study. An insight to various statistical and accounting methods used for evaluation of data is provided. The limitations involving the same are also discussed.

The Seventh Chapter deals with the Indian Steel Industry and traces its growth and development and provides an overview of the same. It is followed by a discussion of the major Mergers and Acquisitions (M&A's) in the Indian Steel Industry.

The Eighth Chapter involves an in-depth analysis of five major domestic Mergers and Acquisitions (M&A's) in the Indian Steel Industry which involve the merger of SAIL with Visvesvaraya Iron and Steel. The merger of SAIL with IISCO is analyzed next. It is followed by the study of the merger of Indian Chrome Charge Limited and Indian Metals and Ferro Alloys. The two takeovers analyzed involve the takeover by Bellary Steel by Pittsburgh and SISCOL by JSW Steel.

The Ninth Chapter analyses three major cross border takeovers which involve the takeover by Tata Steel of NatSteel and Corus and Algoma Steel by Essar Steel.

The Tenth chapter gives a brief overview of the present Mergers and Acquisitions (M&A's). It then enlists the various problems faced in fostering and planning a deal. It further discusses the strategies offered to counter the problems and in the end discusses the future prospects for Mergers and Acquisitions (M&A's).

The last and final Chapter provides the findings and sums up the work. In the end the Researcher suggests directions for future research.

1.7 Conclusion

It is seen that this chapter deals with the concepts related to Mergers and Acquisitions (M&A's) at length. It also throws light on the global and domestic merger and acquisition scenario. The global scenario provides an insight to the projections relating to merger and acquisitions in North America, Europe and UK. The Indian perspective involves the study of the present conditions and also the objectives related to mergers and takeovers.

The next chapter deals with the legal framework relating to Mergers and Acquisitions (M&A's) and provides a description and understanding of various laws and regulations governing Mergers and Acquisitions (M&A's) in India.

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Chapter 2

Business Environment for Mergers and Acquisitions (M&A's) in India

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Business Environment for Mergers and Acquisitions (M&A's) in India

2.1 Introduction

The previous chapter dealt with the Mergers and Acquisitions (M&A's) in the global and Indian economy. It is a tool for growth, development and expansion. However it is a legal process too and is subjected to various laws and regulations. The provisions and sections under various laws which are relevant to Mergers and Acquisitions (M&A's) are discussed here in order to provide an understanding about the legal process governing this mode of expansion.

2.2 Legal Perspective

The Indian economy has predominantly been a closed economy with socialist regulations governing it since independence. Earlier it was marked by excessive state interference, public undertakings, and high degree of protection, restrictions on imports and export, limits on foreign capital inflows and outflows and other regressive policies. However, the economy faced the balance of payment of crisis in 1991 which was caused mainly due to the fiscal imbalances traced back to the 1980's. As a result our foreign exchange reserves had dried up and the economy was in a position to finance imports for just two weeks. The foreign reserves fell to as low as US$ 1.2 billion in January 1991[1].

The economy was at the brink of bankruptcy and close to defaulting on the sovereign debt. It was then that the Central government, under the leadership of the Prime Minister P.V Narsimha Rao along with the Finance Minister Dr. Manmohan Singh ushered in a new era for the Indian economy by introducing a host of financial measures. These are referred to as the Industrial Policy 1991 which came into effect on 24 July 1991. It aimed at opening up of the Indian economy to the private and foreign investors for which a host of measures were introduced. It was marked by an end to industrial licensing except for a short list of industries related to security, strategic concerns, social reasons, hazardous chemicals and overriding environmental reasons, and items of elitist consumption. It was marked by the opening up of the economy to foreign investment, end of public monopolies, opening of passage for foreign technology agreements and also modifications in the MRTP Act were envisaged.

The above reforms led to the creation of a liberalized India with an open economy. Since then various modifications and amendments have been made in various acts and law according to changing needs and circumstances. In this Chapter an attempt has been made by the Researcher to study the various laws and regulations applicable to Mergers and Acquisitions (M&A's) in India.

2.3 *Acts Applicable to Mergers and Acquisitions (M&A's) in India*

The relevant Acts are discussed below which contain provisions regarding Mergers and Acquisitions (M&A's).

2.3.1 *Companies Act 1956* [2]

Section 17 deals with the special resolutions and confirmations by court required for **alteration in the memorandum**. In case of Merger and Acquisitions (M&A's) it is required to make a fundamental change in the objectives, structure, functioning and operations of the business concern for the purpose of which alterations are required to be made in the Memorandum of Association which are to be done in accordance with the provisions of Section 17 of Companies Act, 1956.

The court confirms the alteration only if it satisfied that sufficient notice has been duly served to all parties having an interest in the affairs of the company which might be affected by the alteration (Section 17 (a)). Also according to Section 17 (b) the court has to be also satisfied in respect of all the creditors. In case of those creditors who may have an objection to the proposed alteration and who makes such an objection to the court in the manner directed. It is required that his consent his obtained or his claim is settled down to the satisfaction of the court. Further the Registrar is to be informed and finally an order is to be received by the court in this regard.

Section 42 deals with the membership of a holding company. It provides the necessary provisions and arrangement relating to the membership of a holding company where it states that "Except in the cases mentioned in this section, a body corporate cannot be a member of a company which is its holding company and any allotment or transfer of shares in a company to its subsidiary shall be void"[3]. **Section 108A provides for restriction on the acquisition of shares.** According to it the approval of the central government is required for the purpose of acquisition of shares in a public company or a private company which is a subsidiary of the public company in case the proposed acquisition of shares exceed 25 percent of the paid up equity share capital of such an undertaking.

The spectrum of Section 319 extends to the issues relating to the payment to directors etc. in connection with loss of office and transfer of undertaking or property. Section 391 deals with power to compromise or make arrangements with creditors and members. According to this section the court may order a meeting for making an arrangement and the outcome if sanctioned will be binding on all the parties concerned provided that it is filed with the Registrar and attached to all subsequent memorandums. **Section 392 lists the powers and provisions under which the High Court** is empowered to enforce the arrangements which are entered into for the purpose of which it supervises the arrangement. **Section 393 deals in respect to the disclosure of information** regarding entering into an arrangement with the creditors and also the associated penalties if the requisite mode of action is not undertaken. **Section 394 deals with the provisions relating to the facilitation of restructuring and amalgamation of companies.** The application presented to the court under section 391 is required to enlist the details about the proposed arrangement. **Under section 394A a notice of all the applications** received under Section 391 -394 are required to be sent to the Central government before passing any order under these sections. According to **Section 395,** in case the arrangement has within four months after the making of the offer has been approved by not less than $9/10^{th}$ in value of shares whose transfer is involved, then a procedure is laid down by the court to **acquire the shares of the dissenting shareholders** at any time within two months after the expiry of the said four months. **Section 396 deals with the powers of the Central government in providing its assent** to amalgamation of companies and ensure that it is in the national interest.

At the end copies of every order under this section shall be laid before both the Houses of the Parliament.

Section 396A relates to preserving the books and papers of amalgamated companies with or whose shares have been acquired by another company. The books cannot be disposed off without the prior permission of the Central Government. To overlook these affairs a person is appointed to examine and ascertain if the books contain any evidence regarding any misconduct or offence in conducting its affairs right from the promotion to amalgamation of its shares.

2.3.2 Substantial Acquisition of Shares and Takeover Regulation, 1997[4]

The Regulations under this are to be called as Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeover Regulation, 1997).

i) Chapter I: Preliminary[5]

In this Act as per **Section 2 (1)(b)** " **'acquirer'** means any person who, directly or indirectly, acquires or agrees to acquire shares or voting rights in the target company, or acquires or agrees to acquire control over the target company, either by himself or with any person acting in concert with the acquirer"[6] and as per **2 (1) (c)** " **'control'** shall include the right to appoint majority of the directors or to control the management or policy decisions exercisable by a person or persons acting individually or in concert, directly or indirectly, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements or in any other manner"[7]. Also the **offer period** under **2 (1)(f)** is defined as " 'offer period' means the period between the date of entering into Memorandum of Understanding or the public announcement, as the case may be and the date of completion of offer formalities relating to the offer made under these regulations"[8].

In respect of acquisitions under clause (e)(h) and (i) of sub regulation (1), the stock exchanges where the shares of the company are listed have to be notified about the details of the proposed transaction and that too four, days in advance of the date of proposed acquisition in cases where the acquisition exceeds 5 percent of the voting share capital of the Company. As for the acquisitions under clauses (a) (b), (e) and (i) of sub regulation (1), the acquirer shall within 21 days of the date of acquisition give a detailed report to the Board along with supporting documents which would make him eligible to exercise 15 percent or more of the voting rights. A fee of Rs twenty five thousand rupees is also required to be paid to the Board by the acquirer.

ii) Chapter II: Disclosures of Shareholding and Control of a Listed Company[9]

In regard to the transitional provisions, **Section 6(1)** state that anyone holding shares/voting rights in excess of 5 percent is required to disclose his undertakings to the company within two months of the notification of the Regulation. Section 6(3) requires similar disclosures on the part of the promoters. Section 6(2), 6(3) list the requirement on the part of the companies to provide the information regarding the same to the concerned stock exchanges where the shares are listed. ["(2A), The stock exchange shall immediately display the information received from the acquirer under sub-regulations (1) and (1A) on the trading screen, the notice board and also on its website.][10]

As for the aspect of continual disclosures as per **Section 8(1) (2)**, those holding voting rights or shares in excess of 15 percent including those mentioned in the Regulation 6 are required to make yearly disclosures to the company. The same provision applies to the promoters. Section 8(3) (4) requires that the company is required to provide necessary information to the concerned stock exchanges. As per Section 8(4)), "Every company whose shares are listed on a stock exchange shall maintain a register in the specified format to record the information received under sub-regulation(3) of Regulation 6, sub-regulation (1) of Regulation7 and sub-regulation (2) of Regulation 8"[11].

Section 9 states that the whenever required the Board has the power to ask the Stock Exchanges and the Companies to furnish the desired information.

iii) Chapter III: Substantial Acquisition of Shares/voting rights in and Acquisition of Control over a Listed Company[12]

According to **Section 10** an acquirer acquiring shares or voting rights in excess of 15 percent has to make a public announcement in accordance with the Regulation in order to exercise his right. **Section 11(1)** states that the acquirers holding more than 15 percent and less than 55 percent cannot acquire 5 percent of additional voting rights unless he makes a public announcement in accordance with the Regulation. Section 11 (2) makes public announcement necessary for acquirers holding more than 55 percent but less than 75 percent of shares and seeking additional voting rights.

However it is to be noted that, “Provided that in a case where the target company **had** obtained listing of its shares by making an offer of at least ten per cent. (10 percent) of issue size to the public in terms of clause (b) of sub-rule (2) of rule 19 of the Securities Contracts (Regulation) Rules, 1957, or in terms of any relaxation granted from strict enforcement of the said rule, this sub-regulation shall apply as if for the words and figures ‘seventy five per cent. (75 percent), the words and figures ‘ninety per cent (90 percent)’ were substituted”[13]. According to Section 11(3), in case of disinvestment of Public Sector Undertaking further announcements are not to be made by the acquirer at subsequent stages of acquisition provided the acquirer and seller are at the same stage of acquisition and all disclosures are made in the letter of offer issued in terms of Regulation 18 and in the first public announcement.

“For the purposes of Regulation 10 andRegulation11, acquisition shall mean and include,-

(a) direct acquisition in a listed company to which the Regulations apply;

(b) indirect acquisition by virtue of acquisition of companies, whether listed or unlisted, whether in India or abroad”[14].

Section 12 states that the provisions contained herein shall not apply in cases where a change in control occurs as a result of a special resolution passes at the general meeting of the shareholders. A merchant banker who is not an associate of or group of the acquirer or the target company is required to be appointed by the acquirer under **Section 13. Section 14** gives detail about the timing of the public announcement of the offer.

In case the total securities held by the acquirer including Global Depository Receipts (GDR) and American Depository Receipts (ADR), together with voting rights exceed percentage specified in Regulation 10 or 11, the public announcement has to be made not later than four working days before the he acquires such rights according to **Section** 14(2). As per Section 14(4) where indirect acquisition or change in control is involved, a public announcement shall be made within the consummation of such rights.

Section 15(1) states that the desired public announcement under Regulation 10, 11 or 12 has to be made in one English daily, one Hindi daily and one Regional language daily with wide circulation. Also a copy of the same has to be sent to the Board through merchant banker, all the stock exchanges where the company's shares are listed and also to the target company (Section 15 (2)(i)(ii)(iii)). Section 15(4) states that the offer would be assumed to be made on the date on which it appears in the newspapers referred in the sub-regulation 1. **Section 16** states that the desired contents of the Public Announcement of the offer referred to in Regulation 10,11 or 12 should contain details about the paid-up share capital, fully paid up shares, number of shares to be acquired by the public, minimum offer price, mode of payment, identity of acquirer, existing holding in the target company, salient features of agreement entered into , any price paid by the acquirer for shares of target company twelve month preceding the public announcement, object purpose and future plans regarding acquisition of shares, specified date mentioned in Regulation 19, date by which individual letters of offer would be posted to each shareholder, date of opening and closure of offer and also when shareholders would be informed about acceptance/rejection of offer, date by which payment consideration would be made, details about financial resources, provisions for acceptance by those who are owners but not registered owners of shares, statutory approval if required by any Act, approvals of banks and financial institutions if required, whether offer subjected to minimum level of acceptance and any other relevant information. (Section 16(i) to (xix)). **Section 17** states that the public announcement should not contain any misleading information.

The letter of offer and the specified disclosures are to be filed with the Board, within 14 days of the public announcement made under Regulation 10, 11 and 12 **(Section 18(i))**. The same has to be dispatched to the shareholders not earlier than 21 days from its submission to Board. If within these 21 days the Board asks for changes, these have to be made before dispatching the letter to the shareholders. **Section 18(3)**[15] gives details about the fees to be submitted by the Board.

Table: 2.3.2.1: Fees to be Submitted to the Board

Offer Size	Fee (Rs)
Less than or equal to one crore rupees	100000
More than 1 crore rupees but less than or equal to five crore rupees	200000
More than five crore rupees but less than ten crore rupees	300000
More than ten crore rupees	0.5% of the offer size.

Source: Substantial Acquisition of Shares and Takeovers Regulations, 1997, The Gazette of India Extraordinary Part ii – Section 3 – Sub Section (ii), Securities and Exchange Board of India (SEBI), Notified on 20 February 1997, Retrieved from http://www.sebi.gov.in/Index.jsp?contentDisp=SubSection&sec_id=5&sub_sec_id=5

The date should be specified by which the letter of offer would be sent **to the** shareholders which should not be later than the 30th day from date of **public** announcement **(Section 19)**. As per **Section 20** the offer price should not **be lower** than what determined as per sub- regulation (4) and (5).

Section 20(2) gives detail about the mode of payment of offer price."The offer price shall be payable -

(a) in cash ;

(b) by issue, exchange and, or transfer of shares (other than preference shares) of acquirer company, if the person seeking to acquire the shares is a listed body corporate; or

(c) by issue, exchange and, or transfer of secured instruments of acquirer company with a minimum 'A' grade rating from a credit rating agency registered with the Board;

(d) a combination of clause (a), (b) or (c)"

The mode of payment may be altered in case of revision of offer price and size, provided the amount to be paid in the formal letter has not been altered.

As per Section 20(3), where the offer price involves consideration to be paid in form of securities issuance, the approval required by shareholders has to be obtained within seven days from the date of closure of the offer or else the consideration would have to be paid in cash by the acquirer. The offer price shall be the highest of the negotiated price under the agreement, price paid by acquirer or someone acting in concert with him by way of allotment in a public or rights or preferential issue or the average of the weekly high or low of the closing price of the shares of target on the stock exchanges where its shares are most frequently traded (Section 20(4)).

Section 20(5) provides for the shares those are not frequently traded. The offer price would be determined taking into account the negotiated price under sub regulation 1 of Regulation 14 or highest price paid by the acquirer or persons acting in concert with him for acquisition by way of allotment in public/rights/preferential issue or on basis of return on worth, book value of shares of target company, Earning per Share, Price earning multiple vis-à-vis industry average. Section 20(6) states that in case of disinvestment of Public Sector Undertaking whose shares are not very frequently traded, minimum offer price shall be what the successful bidder pays, arrived after the process of competitive bidding to Central/State government. In case after the public announcement, the acquirers obtain shares from the open market negotiation or otherwise at a price higher than the offer price as in the offer letter, the offer price paid for such acquisition shall be payable to all acceptances received under the offer (Section 20(7)). Section 20(8) states that in respect of incomplete agreements any payment made to the persons other than the target company in excess of 25 percent of offer price arrived under sub regulation (4), (5) or (6) shall be added to the offer price. Section 20(9) states that in cases where in lieu of cash payment, shares or secured instruments of acquired company are acquired then their value shall be determined by an independent merchant banker or chartered accountant. The difference between the offer price and amount due towards calls-in-arrear or calls remaining unpaid with interest shall be deemed as the calculated price for the offer price for partly paid up shares (Section 20 (10)). The offer letter must clearly explain the justification on the basis on which the price has been calculated (Section 20 (11)). In case of indirect acquisition or control the offer price has to be determined with reference to the date of the public announcement and announcement for acquisition of shares of the target company, whichever is higher, in accordance with sub-regulation (4) or sub-regulation (5).

The provisions for 'Acquisition price under Creeping Acquisition' according to Section 20A state the following

(1) An acquirer who has made a public offer and seeks to acquire further shares under sub-regulation (1) of regulation 11 shall not acquire such shares during the period of 6 months from the date of closure of the public offer at a price higher than the offer price.

(2) Sub-regulation (1) shall not apply where the acquisition is made through the stock exchanges[16].

The details of **Section 21** are given here. Section 21(1) deals with the number of shares to be acquired and it states that the shareholders of the target company have to be given a minimum public offer of 20 percent of voting capital of the company by the acquirer. In case as per the listing agreement the minimum level required regarding the public shareholding in the target company is not met then necessary provisions and steps have to be taken by the acquirer in this regard. (Section 21 (2)). Section 21 (3) deals with the minimum size of the public offer made under sub regulation 2A of Regulation 11, which has to be lesser than 20 percent of voting capital or a lesser percentage of voting capital of company that would enable the acquirer and those persons acting in concert with him to maximize their holdings in case there is full subscription. As per Section 21(4) the option available to the acquirer should be clearly mentioned as per sub regulation (3).

Section 21(5) states that, "For the purpose of computing the percentage referred to sub-regulation (1) and (3) the voting rights as at the expiration of [fifteen] days after the closure of the public offer shall be reckoned". Section 21 (6) states that the person offering to buy shares would acquire them on proportionate basis in consultation with the merchant banker if shares offered for sale by shareholders are more than what he offered to buy. However, the offer may be conditional on the level of acceptance according to Section 21A (1). Subject to the provisions of sub-regulation (8) of Regulation 22, an acquirer or any person acting in concert with him may make an offer conditional as to the level of acceptance which may be less than twenty per cent. Provided that where the public offer is in pursuance of a Memorandum of Understanding it shall contain a condition to the effect that in case the desired level of acceptance is not received the acquirer shall not acquire any shares under the Memorandum of Understanding and shall rescind the offer.

Provisions of **Section 22** deal with the following aspects. The obligations of the acquirer are mentioned in Section 22(2) which states that only when the acquirer is in a position to implement the offer, he shall make a public announcement to acquire the shares. Within fourteen days of public announcement a copy of the draft letter has to be sent to the Board of Directors of the target company and stock exchanges where the target company is listed (Section 22 (2)). The target company has to send a copy to all its registered shareholders within 45 days of the announcement of public offer (Section 22 (3)). While the date of opening up of the offer shall not be later than 55th day from date of public announcement, the offer to acquire shall be open for 20 days (Section 22 (4) (5)). All announcements, offers, brochures should clearly state an undertaking on the part of the directors that they take responsibility for the authenticity of the information (Section 22 (6)). Also during the offer period, the acquirer or persons acting in concert with him should not be part of the Board (Section 22 (7)). According to Section 22 (8), where the offer is made upon the minimum level of acceptances, the acquirer or any person acting in concert with him may acquire shares to the extent of minimum percentage specified in sub regulation (1) of Regulation 21, whether or not the offer received response to the minimum level of acceptances. However this clause would not be applicable in cases where the acquirer has paid 50 percent of the amount to be received under the public offer in the escrow account.

Also they cannot acquire shares in the target company during the offer period except by fresh issue of shares (Regulation 3) and would be liable for forfeiture of escrow account in case of non compliance of regulations. (Section 22 (8) (ii) (iii)). As per Section 22 (9), an insider within the meaning of Securities and Exchange Board of India (Insider Trading) Regulations, 1992 if on the Board shall not participate in matters relating to issues concerning the offer.

The escrow account has to be created on or before the date of issue of public announcement of the offer (Section 22 (10)) and the acquirer shall ensure that financial arrangements and necessary disclosures for public offers are duly made (Section 22 (11)). The formalities relating to the offer have to be made within 15 days of the closure of the offer (Section 22 (12)). As per Section 22 (13), if statutory approvals are not obtained due to the acquirers fault, the escrow amount is liable to be forfeited and he would be also liable for the penalties prescribed under the Regulation. Section 22 (14) states that no offer for acquisition of shares of the target company can be made for six months in case of withdrawal of offer in terms of the Regulations. Where the obligations of Chapter III and IV are not met, the acquirer cannot make an offer for acquisition of shares of any listed company for twelve months from date of closure of offer (Section 22 (15)). If acquirer's shareholding increases beyond 15 percent, then it should be provided by him that in case of non-fulfilment of any clause of the Regulation, the agreement for sale shall not be acted upon by him. Section 22 (16) states that within twenty-four hours of acquisition, the acquirer or persons acting in concert have to provide a detailed information to stock exchanges where its shares are listed if they acquire shares (under sub regulation (7) of Regulation 20) at a price equal, less or more of offer price and also quantity, price, percentage and mode of acquisition. The stock exchanges would further publish the information for the public (Section 22 (17). If the acquirer has not stated about his intention of disposing or encumbering any assets of target company in the public announcement or letter of offer that other than in the ordinary course of business where he has acquired control, he shall be debarred from disposing or encumbering the assets of the target company for a period of two years from the date of closure of the public offer (Section 22 (18)). As per Section 22 (19) the acquirer and the persons acting in concert with him are to be collectively held responsible for the due compliance of the provisions of the Regulations.

There are various obligations to be fulfilled by the Board of Directors and there are also various restrictions placed on the Board of Directors of the company after the public announcement of the offer till the approval of the general body of the shareholders is obtained. They cannot sell, transfer, encumber or dispose off any of the assets of the company or issue any un-issued securities or enter into any material contracts. **(Section 23(1) (a) (b) (c))**. As per Section 23(2) within seven days of the request of the acquirer or within seven days from the specified date, the target company is required to furnish all the relevant details about the registered shareholders, warrant holders or convertible debenture holders eligible for participation.

According to Section 23 (3), after the public announcement the Board of Directors cannot fill any casual vacancy with a person having an interest in the acquirer till the date of certification from the merchant banker (Section 23 (3) (a)). Also if a person having an interest in the acquirer is already on the Board, he should not be allowed to participate in any matters relating to the offer (Section 23 (2) (b)). Under the provisions of Section 23(4), the Board of Directors may also send their unbiased opinions about the offer to the shareholders and at the same time facilitate the acquirer in verification of the securities which are tendered for acceptances (Section 23 (5)). Section 23 (6) states that when the requirements of the Regulation are fulfilled and a certificate has been received by the merchant banker towards the same, the Board should take appropriate measures to facilitate the transfer and also make necessary arrangements in Board of Directors to give adequate control to the acquirer over the company.

According to **Section 24** general obligations of merchant banker under Section 24 (1) provide that before the announcement of the public offer he should ensure that the acquirer is in a position to implement the offer, escrow account provisions are fulfilled, necessary arrangement of funds to make payment has been made, public offer is in terms of Regulation and the previous shareholding in the target firm are disclosed. Section 24 (2) states the merchant banker is required to provide a diligence certificate to the Board along with the draft letter of offer. Timely filing of public announcement and letter of offer and also ensuring that it is duly dispatched to all the relevant stock exchanges is also the duty of the merchant banker whose job is to ensure due compliance of the regulations. On fulfilment of these the merchant banker directs the bank for the release of the escrow account to the acquirer and send a report to the Board within 45 days from the date of closure of the offer.

The provisions relating to competitive bidding are enlisted in **Section 25**[17]. According to Section 25 (i), in case a person other than the acquirer is desirous of making an offer, he shall within 21 days of the announcement of the first public offer make his offer. According to Section 25 (3), as for the number of shares the competitive offer should "at least be equal to the holding of the first bidder including the number of shares for which the present offer by the first bidder has been made". The acquirer who made the first public offer has an option to revise his offer within 14 days of the competitive bid announcement. For the competitive bids made under the sub-regulation (1), the same provisions shall ***mutatis-mutandis*** apply (Section 25 (5). Modifications in the public offer can also be made seven days before the closure of the offer as per Section 25 (6). The date of closure of public offer shall be the closing date of all competitive bids (Section 25 (7)). Section 26 states that irrespective of the competitive bidding, upward revisions in the offer can be made by the acquirer.

The provisions about the withdrawal of the offer are contained in **Section 27**. Section 27 (1) states that a offer cannot be withdrawn except when statutory approval has been refused, sole acquirer has died or the circumstances are such that the Board allows withdrawal. As per Section 27 (2), if such a withdrawal is made then a public announcement of the same has to be made in the newspaper along with the reason and simultaneously the Board has to be informed along with the stock exchange where its shares were listed and the target company's registered office.

Section 28 deals with all relevant matters relating to the escrow account. For the purpose of the security of the performance of the obligations under the Regulation, the acquirer is required to submit an amount in the escrow account, such sum as specified in sub regulation 2. Section 28 (2) gives details about its calculations which are as follows:

"(a) For consideration payable under the public offer, - up to and including Rs.100 crores - 25 percent; exceeding Rs.100 crores - 25 percent up to Rs.100 crores and 10 percent thereafter.

(b) For offers which are subject to a minimum level of acceptance, and the acquirer does not want to acquire a minimum of 20 percent, then 50 percent of the consideration payable under the public offer in cash shall be deposited in the escrow amount".

Section 28 (3) states, that the total consideration is calculated assuming full acceptances and at higher price if offer is subject to differential pricing.

The escrow account mentioned in sub regulation (1) should consist of cash deposited with a scheduled commercial bank or bank guarantee in favour of the merchant banker or deposit of acceptable securities with appropriate margin, with the merchant banker or cash, deposited with a scheduled commercial bank in case of clause (b) of sub-regulation (2) of this Regulation (Section 28 (4). Section 28 (5) empowers the merchant banker to instruct the bank to issue banker's cheque or demand draft for the amount in the escrow account as provided in the Regulation. As per Section 28 (6), where escrow account consists of bank guarantee it should be in favour of merchant banker and be valid from announcement of public offer to twenty days after the closure. Section 28 (7) authorizes the merchant banker to effect the sale of securities, where the escrow account consists of securities. In case of loss he would be required to make good the loss from his own pocket. As per Section 28(8) the guarantee and security would not be returned by the merchant banker until the completion of all the obligations. Section 28 (9) provides that the value of escrow account shall be raised by 10 percent in case of upward revision of the offer. Sections 28 (10) states that the acquirer has also to deposit 1 percent of total consideration as security. Section 28 (12) discusses about the release of the escrow account. It can be withdrawn in terms of Regulation 27 if certified by the merchant banker (Section 28 (12) (a) and by transfer to special account as per sub regulation 1 of Regulation 29. the amount transferred shall not exceed 90 percent of the cash deposit made under clause (a) of sub-regulation(2) of this regulation. As per Section 28 (12) (c)) the balance of 10 per cent of the cash deposit made under clause (a) of sub-Regulation (2) of this Regulation or the cash deposit made under sub (10)] of this Regulation can be withdrawn by the acquirer when all the provisions under the Regulation are fulfilled and a certificate towards the same has been given by the merchant banker. Upon the fulfilment of all the obligations the amount under the escrow account can be withdrawn by the acquirer as per Section 28 (12) (d).

Section 28 (12) (e) provides that in case where the obligations are not fulfilled, the amount is forfeited and the merchant banker has entrusted to distribute it. One-third is provided to the target company, one-third to the regional stock exchange and the residual one-third to the shareholders who accepted the offer.

Section 29 provides that within seven days of the closure of the offer the acquirer is required to submit the account in a special account registered with the Board which together with 90 percent of amount lying in escrow account makes for the amount due to the shareholders as consideration for acceptances received (Section 29 (1)). As per Section 29 (2), the unclaimed amount would be transferred to investor protection fund of Regional Stock Exchange of Target Company. In cases where consideration is to be paid through securities the acquirer should ensure that they are dispatched to the shareholders (Section 29 (3)).

iv) Chapter IV: Bailout Takeovers [18]

The provisions of **Section 30** cover aspects relating to acquisitions of a 'financially weak company', though not categorized as a sick unit under a scheme of financial restructuring approved by a lead institution which is entrusted with ensuring compliance of the regulations (Section 30 (2)). For the purpose it will do deep assessment of the financial viability and needs of the concern to be acquired. A scheme for revival is to be drawn which is also to protect the interests of the minority shareholders (Section 30 (3)). Details about the scheme regarding outright purchase or exchange of shares or a combination of both are to be governed under Section 30 (5). As per the Act for the purpose of this chapter, "the expression "financially weak company" means a company, which has at the end of the previous financial year has accumulated losses, which has resulted in erosion of more than 50 percent but less than 100 percent of its net worth as at the beginning of the previous financial year, that is to say, of the sum total of the paid-up capital and free reserves"[19].

The manner of acquisition of shares is explained under **Section 31**. Section 31 (1) states that at least three parties are given the offer of the acquisition and one of them is selected by analyzing the financial, technical and managerial capabilities (Section 31(2)). Details are furnished to the bidders about the financially weak company as and when required by them (Section 31 (3)). According to the **Section 33** the person selected by the lead institution for acquiring shares has to make a formal application to the promoters, management, financial institutions citing the negotiated price and other relevant details. According to **Section 34,** a person acquiring shares has to make a formal announcement containing all the relevant details about the acquisition and a copy of the same has to be forwarded to the shareholders, promoters and management

(Section 34 (3)). In case public shareholdings reduces to below 10 percent of voting rights, the acquirer may make an offer to buy the outstanding shares with the shareholders within three months of the closure of the public offer (Section 34 (4) (a)) or undertake to disinvest through offer for sale or fresh issue of capital to fulfil listing requirements (Section 34 (4) (b). As per Section 34(7), "While accepting the offer from the shareholders other than the promoters or persons in charge of the financially weak company or the financial institutions, the person acquiring shares shall offer to acquire from the individual shareholder his entire holdings if such holding is up to hundred shares of the face value of rupees ten each or ten shares of the face value of rupees hundred each."[20].

Section 35 deals with situations arising from competitive bidding. Once the lead institution has accepted the bid of the acquirer and a public formal announcement is made, no competitive bid shall be entertained other than by promoters or persons in charge of the financially weak company.

For seeking exemption from the provisions of Chapter III, all the relevant offers made under the Regulation 30 have to be notified to the Board through an application. For the purpose the Board may seek all relevant information (**Section 36(2)**). In case the shares of a financially weak company are proposed to be acquired by a State level Public Financial Institution, Industrial Development Bank of India (IDBI) shall ensure the compliance of these regulations (**Section 37**).

v) Chapter V: Investigation and Action by the Board[21]

Under **Section 38** an investigating officer may be appointed to look into any complaints received from investors, intermediaries or any other person involving substantial acquisition of shares and takeovers. Investigation is done to find out if there is any breach of regulation in order to protect the interests of the investors and also ensure due compliance of the provisions of the Act and the Regulations.

Under **Section 39**, a 10 day notice has to be given to the acquirer, seller, target company, merchant banker as the case may be. However in the interest of the investors the Board may authorize the investigation without a notice. All the concerned parties are required to discharge their obligations under **Section 40** which includes supplying all relevant documents, records, information etc. For the purpose they have to allow the investigating officer access to the premises and also extend reasonable facilities for the same (Section 40(2)). The investigating officer shall submit his report to the Board after the investigation. He might submit interim reports if directed (**Section 41**). The findings of the investigating officers are communicated to the acquirer, seller, target company, merchant banker as the case may be and they are also given an opportunity to be heard under **Section 42(1)**. Appropriate measures are to be taken by the concerned parties as directed by the Board (Section 42 (2)).

The Board may also appoint a qualified auditor to look into the affairs notwithstanding anything contained in the Regulation (**Section 43**). The Directions by the Board are provided under Section 44 where the Board may direct appointment of merchant bankers for carrying out disinvestment of shares (**Section 44(a)**), direct transfer of securities or proceeds to the investor protection fund of a recognized stock exchanges (Section 44 (b)), cancel shares where acquisition are in breach of Regulation 10, 11, 12 (Section 44 (c)), direct target company to not give effect or freeze transfers of shares acquired in violation of Regulation 10, 11, 12 (Section 44 (d)), debar a person from accessing capital market or dealing in securities for a specified period (Section 44(e)), direct a person to make a public offer to the shareholders of target company to acquire shares of a certain number at a price determined by the Board (Section 44(f)), direct disinvestment of shares for disclosure requirement under Regulation 6,7,8 (Section 44(e)), direct the concerned person not to dispose the assets of the target company (Section 44(h).

Penalty for non-compliance under **Section 45** lists the actions to be undertaken against the violations of the Act, which might involve forfeiture of the whole or part of amount in the escrow amount (Section 45(2)). The Board of Directors shall also be liable for action if found guilty (Section 45(3)).

The registration certificate of the intermediary found violating the regulations might also be suspended as per the procedure of the Regulation (Section 45(4)). The intermediaries may be held responsible for any misstatement or concealment of material information to shareholders.

As per Section 45(6), "the penalties referred to in sub-regulation (1) to (5) may include-

(a) criminal prosecution under section 24 of the Act;

(b) monetary penalties under section 15 H of the Act;

(c) directions under the provisions of Section 11B of the Act.

(d) directions under section 11(4) of the Act;

(e) cease and desist order in proceedings under section 11D of the Act;

(f) adjudication proceedings under section 15HB of the Act."

An appeal may be made by the aggrieved persons to the Securities Appellate Tribunal under **Section 46**[22]. **Section 47** deals with aspects relating to Repeal and Saving and as per Section 47(1), "The Securities and Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, [1994] are hereby repealed."

It shall be deemed that all actions taken, exemptions granted, applications made, appeals preferred to Central Government and all other measures are strictly done under the corresponding provisions.

2.3.3 The Competition Act, 2002[23]

As per the Competition Act in the event of an acquisition of one or more enterprises by one or more persons or merger or amalgamation of companies is considered as a combination as per **Section 5,** if the parties involved in the acquisition, which includes the acquirer and also the entity or the enterprise which has been acquired or is being acquired jointly have in India assets of a value exceeding one thousand crores or a turnover of more than three thousand crores (Section 5 (a) (i) (A). The persons involved should fulfil the above condition or they should have in India or outside India assets valuing more than US$ 500 million or a turnover exceeding US$ 1500 million(Section 5 (a) (i) (B) or as per Section 5 (a) (ii), the group which is being formed s a result of the amalgamation or merger would post-acquisition have in India assets valuing more than Rs 4000 crores or have a turnover exceeding Rs 1200 crores (Section 5 (a) (ii) (A)) or the group as per Section 5 (a) (ii) (B)should have assets aggregating over US$ 2 billion or a turnover of more than US$ 6 billion in India or outside India.

Section 5 (b) (i) enlists the various provisions involved in cases where the person who is acquiring control already has a direct or indirect control over another enterprise engaged in production, distribution, trading of similar businesses. In these cases according to Section 5 (b) the enterprise to be acquired and the enterprises over which the acquirer already has an indirect or direct control should jointly have in India assets aggregating more than Rs 1000 crores or a turnover of more than Rs3000 crores as per Section 5 (b) (i) (A) or as per Section 5 (b) (i) (B) assets grossing more than US$ 500 million or a turnover exceeding US$ 1500 million in India or outside India.

As per Section 5 (b) (ii), the group that has undertaken the acquisition should jointly have or after the acquisition should jointly have assets in India of a value exceeding Rs 4000 crores or a turnover of more than Rs 12000 crores (Section 5 (b) (ii) (A) or as per Section 5 (b) (ii) (B) have in India or outside India assets of a value of more than US$ 2 billion or a turnover exceeding US$ 6 billion.

As per section 5 (b) (ii) (C), the merger or amalgamation as a result of which an enterprise is created should have in India assets valuing more than Rs 1000 crores or a turnover that is exceeding Rs 3000 crores or it should have in India or outside India assets aggregating more than US$500 million or a turnover of more than US$ 1500 million. As per Section 5 (b) (ii) (C) (ii) the group that has been created as a result of the merger of the enterprise should or would have in India assets valuing more than Rs 4000 crores or a turnover of more than Rs 12000 crores or should have in India or outside India assets of a value of more than US$ 2 billion or a turnover exceeding US$ 6 billion.

As per Competition Act 2002, the term group implies, "two or more enterprises which, directly or indirectly, are in a position to —

(i) exercise twenty-six per cent. or more of the voting rights in the other enterprise; or

(ii) appoint more than fifty percent, of the members of the board of directors in the other enterprise; or

(iii) control the management or affairs of the other enterprise;"[24]

Section 6 of the Act lists the various guidelines of the prescribed framework that regulates the various combinations in India. According to section 6(1) if in case of a combination an enterprise is likely to have an adverse impact on the level of competition in the market it would not be allowed and any such combination would be declared as void.

Section 6 (1) further gives details about the relevant procedures to be followed by those whose propose to enter into a combination. For the purpose a notice is to be given to the commission along with the relevant fees and required details involving the proposed combination which has to be duly provided within seven days of the approval of the merger to be undertaken under Section 5 (c) by the Board of Directors of the concerned enterprises relating to the merger or amalgamation undertaken (Section 6 (2) (a). According to Section 6 (2) (b) all relevant documents related to the execution of the agreement under various appropriate sections have to be duly furnished. Section 6 (3) provides that the commission should deal with the notice received relating to the proposed combination as per Section 29, 30 and 31. Section 6 (4) states that the provisions should not apply to subscription of shares or financing by a public financial institution, foreign institutional investor, bank or venture capital fund under a loan or investment agreement.

Section 6(5) gives details about the requirements to be fulfilled by the financial agencies referred above in Section 6 (4). These have to within 7 days from the date of acquisition provide all the necessary and relevant details to the commission.

2.3.4 The Foreign Exchange Management Act, 1999 (FEMA)[25]

The process of Mergers and Acquisitions (M&A's) especially the cross border deals involve foreign exchange transactions. Hence it is most appropriate to discuss a synoptic view of the Foreign Exchange Management Act (FEMA), 1999 which was formulated as an improvement over the Foreign Exchange Regulation Act (FERA), 1973 in order to facilitate external trade and payments and also promote the development and maintenance of the foreign exchange market in India on 29 December, 1999. The Act extends to the whole of India and also to all branches, offices and agencies located outside India but owned but by an Indian citizen and came to force on 1 June, 2000. According to **Section 3** of this Act, no person shall engage himself in any dealing relating to transfer of foreign exchange or foreign security with a person who is not authorized. No transaction should be made to or to the credit of a person who is not resident in India. Also the Act clearly disallows receipt of any payment on behalf of or by the order of a person who is not resident in India. Financial transactions done in India in relation to acquisition or creation of transfer of a right to acquire an asset outside India by any person is also prohibited by the Act. Apart from provisions duly provided for in the Act holding of foreign exchange, foreign security and immovable property outside India is also clearly disallowed. Current account transactions in a manner approved through an authorized person is allowed, provided there are no restrictions imposed by the RBI in this regard **(Section 5).**

As per **Section 6** a person may enter into capital account transactions involving foreign exchange but only through authorized persons. In consultation with the RBI, Central Government issues regulations regarding these capital account transactions as per Section 6 (3). However as per Section 6 (4) a person resident in India might be allowed to hold foreign currency, security or immovable property outside India if he owned it when he was a resident outside India or he inherited it by a person who is resident outside India. In the same way a person who is resident outside India might be allowed to own Indian currency, security or immovable property if he owned it when he was a resident of India or he inherited by someone who was resident in India as per Section 6 (5). The Reserve Bank of India without any discretion might put restrictions on the operations of a branch or office by a resident outside India.

Section 7 provides the various provisions and measures to be undertaken by exporters of goods and services which include providing all the relevant details about the goods to be exported and also the value to be realised for the same. All relevant information required for realization of the export proceeds should also be provided. **Section 8** states that in case of persons to whom foreign exchange is to be accrued, shall take all reasonable measures to realize and repatriate it in the manner specified within the stipulated period. **Section 9** provides detail about certain exceptional situations where provisions of Section 4 and8 are exempted. For example, foreign exchange is allowed to be held in certain permissible limits or in a limit that is specified by the RBI or that received as gift or inheritance or through legitimate employment or through other means as specified by the RBI. RBI is empowered under **Section 10** to authorize a person to deal in foreign exchange on the basis of an application received in this regard. The authorization should be in written and duly comply all the provisions. RBI may also revoke such authorization for a reason it deems fit and a reasonable opportunity to be heard is required to be provided to the authorized person in this regard. The person authorized to deal in foreign exchange has to be utmost careful in his operations and take due care that his operations are not in contravention of any provisions laid down in this regard.

As per **Section 12**, RBI can make inspections and examine operations of the persons so authorized and the latter are required to furnish all particulars and information in this regard. **Section 13 to 15** gives details about the penalties and provisions imposed in cases where above regulations are no complied with. In case of companies if a person violates any of the provision then the person who is in charge or at the helm of affairs at the time the contravention took place, would be held responsible. Both him and the company would be guilty and would be liable for prosecution and imposition of penalties as specified. However, such person would not be liable for punishment if he proves that the violation that took place was not in his knowledge and on his part he carried out his duties with due diligence. If he fails to prove so, he would be deemed to be held guilty for the contravention and would be punished accordingly.

Section 36 and 37 enlists the various provisions relating to the establishment of the Directorate of Enforcement and also the various powers provided regarding investigation of Acts that are not in compliance with the provisions of this Act.

2.3.5 Securities Contracts (Regulation) Act, 1956[26]

According to **Section 13** of this Act, the Central Government has the power to evaluate the contracts that take place on the basis of the nature and volume of the transactions in the securities and if it feels that there are certain elements that are against the provisions of the Act it may through a notification in the Official Gazette declare it as illegal. **Section 14** deals with the circumstances under which the contracts in notified areas can be declared void if it is in contravention with the bye-laws mentioned under clause (a) of sub-section (3) of section 9 irrespective of the fact that whether the person has entered into such contract having knowledge of the bye laws or not.

As per **Section 15** a member of a recognized stock exchange shall not enter into any contract with a person other than a member of a recognized stock exchange as principal otherwise he would have to obtain the consent of such person and disclose in the memorandum that he is acting as a principal. Such confirmation has to be obtained within three days from the date of the contract.

As per **Section 16,** the Central Government has the power to prevent undesirable speculations in any area or State. For the purpose of which it may issue a notification in the Official Gazette disallowing any person to enter into a contract in a specified manner in a manner mentioned therein

. **Section 21** gives details about the various provisions relating to the listing of securities in the recognized stock exchanges. **Section 21A** deals with the various provisions relating to delisting of securities.

The penalties imposed for non-compliance of regulations under the Act are dealt with under **Section 23.**

2.3.6 *The Securities And Exchange Board Of India Act, 1992 (SEBI) (No.15 Of 1992), 4 April, 1992*[27]

This act was mainly framed to duly safeguard to provide protection and guard the interests of the investors and also promote the development of the market. Regulation of the Securities market and other corresponding matters are also dealt with here.

CHAPTER VA

As an amendment to the Securities and Exchange Board of India Act, 1992 the Securities And Exchange Board Of India (Amendment) Act, 2002 was passed and it was to be deemed to have come on force on the 29th day of October, 2002.This deals with the provisions relating to prohibition of manipulative and deceptive devices, insider trading and substantial acquisition of securities or control.

As per **Section 12A** it shall be ensured that no manipulative or deceptive device or any other measure which violates the provisions of the Act in relation to the issue purchase or sale of any securities which is listed or proposed to be listed on a recognized stock exchange. The section also prohibits all measures relating to any defraud in connection with the issue of securities which are listed or proposed to be list on a recognized stock exchange. All practises or course of business which act or might act as deceit for any person involved are also prohibited in this Section. Insider trading and dealing in securities while having material or non-public information or communication of such person in a way that is against the provisions of this Act is also prohibited in this Section. Acquiring control of a company or securities which proportionately is more than the equity share capital of the company whose shares are listed or proposed to be listed on the stock exchange is also disallowed in this section.

According to **Section 15H** if a person fails to disclose his shareholding before acquiring shares in a body corporate or fails to make a public announcement regarding acquiring offer to the shares at a minimum price or make a public offer by sending a letter of offer to the shareholders of the company concerned or make payment to the shareholders who sold their shares as per the letter of offer they received, shall be liable to a penalty up to twenty five crores or three times the amount of profit as a result of failure to do the above whichever is higher.

2.3.7 *Securities And Exchange Board Of India (Disclosure And Investor Protection) Guidelines, 2000*[28]

These guidelines have been issued by the Securities and Exchange Board of India under Section 11 of the Securities and Exchange Board of India Act, 1992. These Guidelines may be called the Securities and Exchange Board of India (Disclosure and Investor Protection) Guidelines, 2000. These guideline are applicable to all the public issue by both the listed and the unlisted companies. These are also applicable to all the listed companies for offers of sale and rights issue whose equity share capital is listed except in the cases where the aggregate value of securities is less than Rs 50 lacs. In these cases a letter of offer is prepared and the same is filed with the Board for providing the requisite information and putting it on the SEBI website. Except in cases where explicably stated these guidelines are also applicable to all offers to the public by the unlisted companies.

According to **Section 2(2)(4),** in case of equity shares or any other security that can be converted into equity shares of a company in future an offer for sale cannot be made unless the provisions which are laid down in clause 2.2.2 or 2.2.2 whichever applicable and in clause 2.2.2A are satisfied.

According to **Clause 8.3.5.1.1,** an unlisted company might request the Board to exempt it from the provisions of the clause (b) to sub-rule (2) of Rule 19 of the Securities Contracts (Regulation) Rules, 1957 for the purpose of listing of its shares without making an initial public offer if it satisfies the following conditions. Under a scheme of reconstruction or amalgamation under the Companies Act 1956, which is approved by the High Court the shares of the unlisted company (transferee) have been allotted to the holders of a listed company that is the transferor. The unlisted company which is the transferee and is seeking listing should have a 25 percent of the paid up share capital, post scheme allotted to the shareholders of the listed transferor company and the unlisted company has not issued/reissued any shares which are not covered under this scheme. The above calculation of 25 percent paid up capital should be made taking into consideration any outstanding warrants, instruments or agreements the holder of which has a right to take up shares in the unlisted transferee company. The share certificates in relation to the above scheme should have been dispatched to the shareholders or they should be marked as the beneficial owner in the depositories.

2.3.8 Securities And Exchange Board of India (Delisting Of Securities) Guidelines – 2003[29]

These guidelines were issued under Section 11(1) of SEBI Act, 1992. These are read with sub-section (2) of **Section 11A** of SEBI Act. Its primary objective is to protect the interests of the investors in the securities market.

These guidelines primarily apply to the delisting of the securities of the company and shall apply to the voluntary delisting being wanted by the promoter or acquisition of shares by the promoters or any other person such that the public shareholding falls below the minimum limit specified in the listing conditions leading to a situation warranting delisting of securities, promoters seeking voluntarily to delist their securities from all or some of the stock exchanges, persons who is in control of the management increase his shareholding due to which the public shareholding falls below the limit specified leading to the company being unlisted or the company being compulsorily delisted by the stock exchange. As per **Schedule III** (Guideline 17.1) there are certain norms to be followed for delisting of securities by the Stock exchanges. The proportion of equity capital has to be seen which is in the hands of the public investors with reference to the existing paid-up equity capital, market lot, movement in share prices, market capitalisation, SEBI's Takeover Regulation 21 (3) and Clause 40A of the Listing Agreement. Also the Companies should appoint market makers and ensure that there is liquidity in every trading cycle for which there should be some volume of trading for price discovery on the market. The financial and business aspects needs to be evaluated as whether it is making profits in the past two or three years and whether it is in public interest for it to be listed. The tangible assets held by the company are also a consideration for the same. The past record regarding compliance of various listing agreements is also a consideration in this regard. Maintenance of books and accounts, submission of annual reports and other documents, payment of listing fee, services to investors, maintenance of fair accounting practises, changes in accounting year, name, agent etc. The track record of the promoter particular in areas of deceptive and insider trading are examined or they are not in touch or accessible for communication with exchange or the company has become sick and not able to fulfil its obligations are all criterions for preparing a profile of the company on the basis of which the exchange takes a decision as regards delisting. The decision regarding delisting should be taken by a panel which comprises of two Directors of exchange, one representative of the investors, one representative of the Central Government and the Executive Director or Secretary of the Exchange. A notice relating to the delisting is to be duly sent to the company and the Stock exchanges where its shares are listed. A notice of the termination of the listing agreement is to be provided. However an appeal against the compulsory delisting may be made to SEBI.

2.3.9 *Securities And Exchange Board Of India (Merchant Bankers) Rules, 1992*[30]

These rules may be called the Securities and Exchange Board of India (Merchant Bankers) Rules, 1992 and these rules are made under the powers conferred to the Central Government under **Section 29** of the Securities and Exchange Board of India Act 1992, (15 of 1992) and shall come into force on the date of their publication in the official gazette. According to these rules no person shall act as a merchant banker unless he has registered himself and holds a certificate with him which is granted by the Board under the Regulations, for granting the certificate there are certain conditions to be followed by the Board. Prior permission is required to be obtained by the Board for carrying on operations, fess has to be paid as required in the regulations for registration or renewal, adequate measures have to be taken to effectively address the grievances of the investors within a month of the receipt of the complaint and the Board has to be apprised of the details related to it. All the provisions of the regulations have to be duly followed by the merchant banker. The certificate issued shall be issued for a period of four years from the date of issue.

2.3.10 *Securities and Exchange Board of India Depositories Act, 1996*[31]

This Act is called the Depository Act, 1996 and extends to the whole of India. It is deemed to have come to force on 20th September, 1995. It was published in The Gazette of India (no. 51) dated August 12, 1996. **Section 5** provides that any person can enter into an agreement for availing the services of the depository through a participant as per the laws and regulations set out for the same. **Section 7** deals with the registration of transfer of securities and provides that on the receipt of intimation by the participant the depository s required to register the transfer of the security in the name of the transferee and if the beneficial owner desires to have the custody of the security the issuer has to be informed accordingly. **Section 10** provides that the depository should be considered as the registered owner of the securities for the purpose of effecting transfer of ownership on the behalf of the beneficial owner. The depository is required to maintain a record of the index of the registered owner as per **Section 11** according to Sections 150, 151 and 152 of the Companies Act 1956 (1 of 1956). The issuer is required to be provided timely with all the relevant information by the depository regarding the transfer of securities in the name of beneficial owners as per the manner specified according to Section 13.

Section 21 provides that in case of any offence committed by the company relating to this Act, all the persons who were in charge of the affairs of the company are liable to be prosecuted for the same unless a person proves that the reported offence was not committed in his knowledge and he had carried out his duties in the best of faith and diligence to prevent the occurring of such an offense.

2.3.11 Income Tax Act, 1961[32]

According to Section 2 (1B) of this Act the term amalgamation means "When or more companies merger with another existing company or two or more companies merge to form a new company, it is known as amalgamation. The company which so merges is the amalgamating company and the company with which the merger takes place or the company which is formed as a result of the merger is known as the amalgamated company."[33]

From the above definition it is observed that the Income Tax Act, 1961 does not differentiate between amalgamation and absorption and a valid amalgamation should satisfy the following conditions. Amalgamated company becomes the owner of all the properties and also of all the liabilities of the amalgamating companies which it had before the amalgamation took place. The total shareholders, i.e. the equity and preference shareholders holding not less than 75 percent in value in the shares of amalgamating company become the shareholders of the amalgamated company. In calculating the above value of 75 percent, the value of shares that are held before the amalgamation by the amalgamated company or its nominee or by a subsidiary company should be excluded.

Tax incentives for Amalgamation:

a) **Amalgamating Company:** In case the amalgamated company is an Indian company the amalgamating company shall be exempted from capital gains tax on transfer of capital asset (Section 47 (vi)). Where there is an agreement between two foreign companies to transfer shares of an Indian company it shall be exempted from capital gains tax if at least 25 percent of the shareholders of amalgamating foreign company continue to be shareholders of the amalgamated foreign company and such a transfer does not attract tax liability in the country of origin of the amalgamating company (Section 47 (via).

b) **Shareholders of Amalgamating Company:** When assesses gets a share as property in consideration of shares transferred in amalgamation, the period for which the shares were held by assesses in the amalgamating company shall be considered. Also they would not be liable to capital gains tax for transfer of shares which they get due to the amalgamation.

c) **Amalgamated Company:** In case full deduction has not been claimed regarding expenditure on scientific research or acquisition of patent or copyright, obtaining license to operate telecommunication services, preliminary expenses, voluntary retirement scheme, prospecting of certain minerals or petroleum and natural gas, capital expenses on family planning, the amalgamated company can claim the unabsorbed amount. Deduction is allowed in respect of amalgamation expenses @ 20 percent of expenditure for each of five successive previous years beginning with the previous year in which amalgamation takes place. If a debt transferred to the amalgamated company becomes bad it would be allowed to consider it as bad debt. Where assets are transferred in cases where amalgamated company is Indian, the actual cost of the asset as owned by the amalgamating company should be considered. In case of depreciable asset the written down value of the asset would be considered. It can also claim deductions under Section 80-IABor 80 IB or 80 IC or 80IE on fulfilment of certain conditions. Also in case of amalgamation of companies in Free Trade Zones, 100 percent Export Oriented Undertakings, Special Economic Zone then the exemption shall be allowed to the other unit for the unexpired period.

According to section 72A the accumulated loss and the unabsorbed depreciation of the amalgamating company shall be deemed to be the loss or unabsorbed depreciation of the amalgamated company of the previous year in which the amalgamation was effected and would be entitled to set it off as its own upon the fulfilment of the given conditions.

a) The amalgamating company is engaged in the business in which the loss or depreciation has occurred for three or more years and it has held on the date of amalgamation continuously three fourth of the book value of fixed assets held by it two years before the amalgamation took place.

b) The amalgamated company should hold at least 75 percent of book value of fixed assets as a result of the amalgamation of the amalgamating company and should be in the business of the amalgamating company at least till five years after the amalgamation.

2.3.12 __The Industries (Development and Regulation) Act, 1951 (IRDA)__[34]

As Per Chapter III-A, 'Direct Management or Control Of Industrial Undertakings By Central Government In Certain Cases' the Central Government has the power to assume management or control of an industrial undertaking under Section 18A if the investigations undertaken under Section 15 or16 reveal that the business is being conducted in a manner which is not in the best interest of the concerned industry and the public. For the purpose a person or a body of persons may be authorized to take over the undertaking in respect to functions and control either in whole or part as specified in the order for a period which shall not be effective for a period exceeding five years as specified. However the period may be extended after the expiry for five years for two years at a time if the Central Government deems it fit for the best interest of the public and the industry. Under Section 18AA the government may pass such orders for taking over the operations by a person or a body of persons without undertaking an investigation in this regard if it has evidence to prove that the people managing the affairs have been reckless, the company has been closed for not less than 3 months which is not in the best financial interest of the company, industry, public and it can be restarted. As per Section 18B as result of the order under Section 18A the persons in charge prior to the order would have been deemed to have vacated their offices and new management would take over the operations.

2.3.13 The Sick Industrial Companies (Special Provisions) Act 1985 (SICA)[35]

This Act provides for the reconstruction of the Companies which have become sick in the sense that they have accumulated losses more than its net worth. For the purpose the Board for Industrial and Financial Reconstruction (BIFR) would investigate the financial situation of the company and find out if it can be declared sick under the provisions of this Act under Section 15 and recommend measures for the same. Under Section 18 the scheme has to be prepared and sanctioned which may involve a change in the management of the sick company by change in or takeover of the management of the company or the amalgamation of the sick industrial company with another company or any other company with the sick industrial company. Section 18 (2) provides for the relevant measures to be undertaken for fulfilling the scheme passed under Section 18 (1) relating to bringing into effect the scheme of takeover or amalgamation which provides for transfer of properties and liabilities, changes in Board of Directors, alteration in Memorandum of Association and Articles of Association, continuation of cases registered against the sick company.

2.4 Legal Procedure for Mergers and Acquisitions (M&A's) in India[36]

Once the transferor and transferee company have been agreed, i.e. the merger partner has been identified and terms of merger regarding amount, terms, management, control and other formalities have been finalised, there is a legal procedure to be followed. The scheme that has been finalised to bring about the merger or amalgamation should provide all the relevant details regarding transferor and transferee company, date on which the merger is to be finalised, terms and conditions of transfer of assets and liabilities, description of the terms and consequences of scheme, details about the share capital structure regarding authorized, issued, subscribed and paid up capital of both the transferor and transferee company, terms for transfer of shares regarding share exchange ratio, allotment and listing of shares, conditions regarding payment of dividend, status of employees and various funds and schemes relating to employees after the merger, accounting and income tax provisions to be followed post merger, applications to be made under Companies Act 1956, procedure to be followed for getting approval from different agencies, description of cancellation scheme if approvals not obtained. Once the scheme has been prepared the Board of Directors are required to approve it. They should approve the scheme only when the scheme has been approved by specialised financial institutions, banks, trustees for debenture holders. Approval of RBI is required where there is involvement of payment to foreign exchange to NRI's or foreign nationals under the provisions of FEMA. The stock exchanges have also to be duly informed about the proposed amalgamation which is followed by an application to the relevant High Court for which a copy of the Memorandum of Articles, Company's latest audited balance sheet and a copy of the resolution of the Board authorising the Director to make an application to the High Court is submitted. The High Court acts upon the application and gives direction for conducting a meeting for which instructions relating to the date, time, venue and quorum are fixed by it. It also appoints an Advocate Chairman to preside over it and submit a report to the court. If requested similar meeting of creditors is also called for. The approval of the Registrar of High Court to notice for calling the meeting of the members and creditors is essential. A notice of the same is to be dispatched to the members or shareholders or an advertisement is to be made at least twenty-one days before the meeting. Confirmation about the notice being served to shareholders and the advertisement notice being complied with have to be done at least one week before the meeting. The meeting has to approve the move for merger/amalgamation and pass a resolution for the same. For the same a majority vote of three-fourth of the members who vote in the poll in terms of the value of shares held has to be obtained. The resolution as passed which approves the scheme of the proposed merger/amalgamation has to be filed with the Registrar of Companies. The chairman of the general meeting has to submit a detailed report to the court giving all the details about the same within seven days from the date of the meeting. Within seven days of the submission of the report a joint petition signed by both the companies has to be submitted to the High Court and a notice of the hearing has to be advertised not less than 10 days before the hearing. The Court will issue a notice of the same to Regional Director, Company Law Board under **Section 394A**. On hearing the petition the Court will take into the account the objections from the entitled persons if any pass and then pass an order allowing the merger/amalgamation to proceed. The court order has to be filed with the Registrar of Companies by both the companies. As per the scheme of merger/amalgamation the assets and liabilities are acquired and shares are also allotted to the shareholders of

Transferor Company. Following the transfer the company taking over the assets and liabilities would apply to the relevant stock exchanges requesting for the listing of new shares. The court order has also to be annexed to the memorandum of the transferee company and the books and papers of the amalgamated company have to be duly preserved. The secretarial obligations regarding the transfer in terms of transfer of investments, filing with Registrar, intimating banks and creditors and other post-merger reorganization of the transferee company have to be done with. Once the scheme has been passed by the requisite number of shareholders and creditors it cannot be withdrawn by passing resolutions against it in the subsequent meetings. However due to certain circumstances cancellation of the scheme and winding-up order can be made under **Section 392 (2).**

2.5 Conclusion:

The above discussion throws light on the gradual growth of the Indian economy over the years, from a closed economy to a liberal economy. Prior to 1991 the Indian borders were closed to foreign investors and even the domestic players faced major legal hurdles but with the liberalization measures undertaken a new era was ushered in. In comparison to its foreign counterparts the Indian economy is still having stringent regulations regarding trade and investment especially relating to foreign investments. However, being a developing economy it is the priority of the government to protect the interest of all classes of societies. Opening up of the economy to cross border deals may negatively impact the domestic producer. On the other hand, major domestic deals might result in monopoly and exploitation of customers. Keeping in mind the various facets the Researcher concludes that the complexity of our legal system needs to be reduced but protecting the rights of the domestic producer and customer should be accorded the highest priority.

The succeeding chapter throws light on Mergers and Acquisitions (M&A's) that have taken place in the Indian economy in the recent years. The major deals in various sectors are showcased along with the impact of the recession on the number and value of deals.

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Chapter 3

Mergers and Acquisitions (M&A's) in India

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Mergers and Acquisitions (M&A's) in India

3.1 Introduction

The previous Chapter dealt with the legal framework relating to mergers and acquisitions (M&A's) in order to provide an understanding about the legal framework in which M&A's take place in India. This Chapter deals with the M&A's in India. The liberalization of Indian economy and its growth as one of the fastest growing economy post-liberalization is discussed. The waves of mergers and consolidations over time is studied which is followed by the motivation behind the mergers and acquisitions (M&A's) deals in India. The chapter further traces the growth of India as a major destination for foreign investment and also as a major investor in foreign countries in the last few years. Further sector-wise analysis of major mergers and acquisitions (M&A's) deals in India is carried out. In the end, impact of recession on the number and volume of deals after 2007 is studied.

3.2 Motivation for Mergers and Acquisitions (M&A'S) in India

The Indian corporate sector has used Mergers and Acquisitions (M&A's) as a tool to expand and gain global recognition. The low cost structure of resources in the form of capital, labor (skilled and unskilled) and technology has been used as an effective leverage to capitalize and build upon. Through this strategy it is easier to foray into both new and emerging markets worldwide and in the process increase expertise and market share. With the level of competition towering, this strategy is also appearing as a mode of survival in the present era. There are certain Indian enterprises which are using this tool to diversify their business as it easier to acquire businesses dealing in different product lines rather than to initiate a new product line from scratch.[1] Another trend being followed by the Indian enterprises is to acquire well-established counterparts which have greater exposure and experience as compared to their acquirers. Such an approach makes the post-merger management a simpler issue for the acquiring firm. The well-experienced management team is not disturbed and it continues to play a pivotal role in the management of the resulting firm. It serves various purposes. Firstly, the management team is boosted and motivated by the trust of the acquirers and secondly it makes the cultural integration of the acquirer and acquiring firm a much easier issue to handle. Integration of work force is a critical issue for ensuring post-merger success and retaining the old management helps ease the task.

The favorable economic environment is another incentive which is spurring the rate and volume of Mergers and Acquisitions (M&A's) deals. India is firmly on the growth trajectory and unlike earlier times finance and capital is available through means which are more accessible than they were ever before. The banking and financial structure in India has improved by many leaps and bounds and it is easier to procure finances. It has made it possible for Indian companies to acquire companies which are larger than them in terms of size. Various modes of financing are available in the form of debt, private equity, foreign capital etc. Indian companies are firmly placed on the global map and their recent Mergers and Acquisitions (M&A's) activities have been hitting the headlines all across the world

3.3 Indian Scenario for Merger and Acquisitions (M&A'S) since 1980's

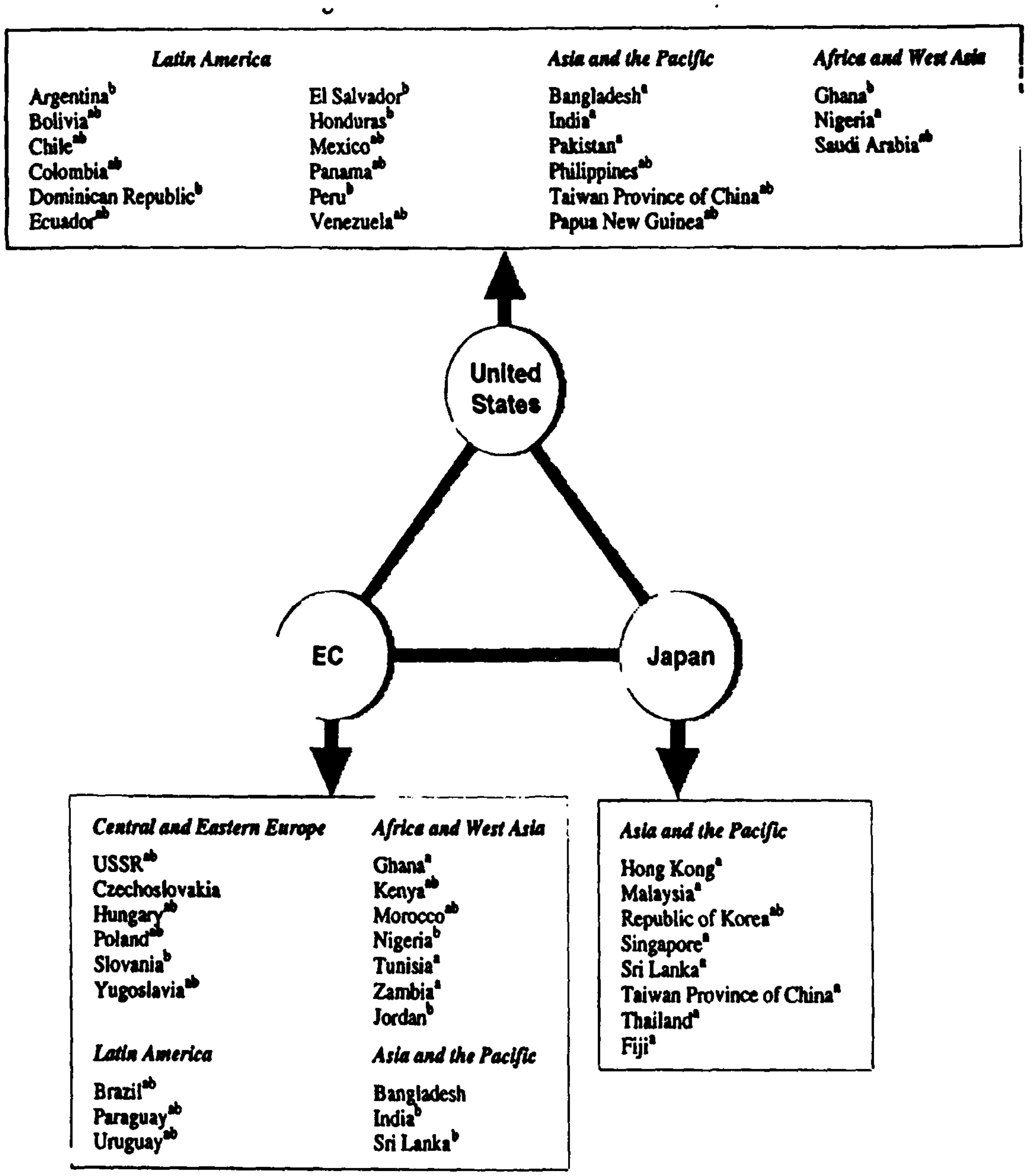
On studying the past trends and history of corporate restructuring it can be said that the present phase is the fourth wave in the mergers and acquisition movement. The **first wave** can be traced back to the 1980's when reforms were introduced under the leadership of Rajiv Gandhi. Corporate like Swaraj Paul, Manu Chaabria and R.P Goenka were the business wigs at that time. Legal provisions for the purpose of expansion were very stringent in terms of licensing, quota, foreign exchange regulations etc. due to which merger and acquisition was a popular option for the entrepreneurs envisaging expansion plans. The first major IPO was also issued at that time.

The opening up of the economy in 1990's with the new Industrial Policy unveiled in 1991 ushered in a new era where stiff competition began to emerge both at the domestic and international level. An effective way to counter it was Corporate Restructuring which marked the **second wave** of mergers and acquisitions. Another round of IPO issue took place then. It was notable that during the 1990's there was a global slowdown experienced in foreign investment outflows which fell from $232 billion in 1990 to $171 billion in 1992. Recovery was staged in 1993 with FDI outflows reaching $195 billion. The inflows also fell from $208 billion in 1990 to $162 billion in 1991 and $ 158 billion in 1992. It recovered to $194 billion in 1993.[2] Also the global economic scenario was such that there was a general uprising of developing countries due to upsurge in economic growth, rapid industrialization activity, availability of low cost skilled labor as a result of which there was a marked increase in the flow of FDI's to countries like China and India especially.

The economic scenario in the wake of balance of payment crisis underwent large scale financial reforms where there was a marked shift in the policies. Liberalization measures were introduced where licensing was removed, participation of private sector was promoted, restrictions on FDI were eased, MRTP Act was abolished, and EPZ's were promoted. The period was also marked by strengthening or organizations like ASEAN, AFTA etc whose primary motive was to promote regional trade and cooperation.

There was a time when there were serious doubts, whether the global system will ever emerge and now when the political and economic boundaries have been wiped off, we have indeed come a long way from where India stood prior to the 1990's. During that period Foreign Direct Investment (FDI) was concentrated among few industrial and developed economies of the world, which was called the Triad and there was a group of developing countries and economies around each Triad member as shown in Figure 3.3.1. However during that period trade was regionally concentrated and there were lot of bottlenecks in developing integrated international production. Linkages were yet to be developed as regards mobility of capital, technology, labor and other factors of production.

Figure 3.3.1: Foreign-Direct-Investment Clusters of Triad Members, 1990
(Economies in which a Triad member dominates inward
Foreign-direct-investment stocks and/or flows)



Source: UNCTAD, Programme on Transnational Corporations, *World Investment Report 1993: Transnational Corporations and Integrated International Production* (United Nations publication, Sales No. E.93.II.A.14).

a In terms of average inward FDI flow, 1988-1990.
b In terms of inward FDI stock for 1990.

However, there were still many apprehensions that existed regarding structuring of Mergers and Acquisitions (M&A's). The entire world economy was gearing to evolve a system where all economies of the world would evolve various policy changes to facilitate international production and at the same time effectively meet the challenges of effective competition. The investment climate in India with liberalization measure in place, were indeed more favorable than they were ever before.

The **third wave** was seen in the early 2000 which was marked through consolidation among the business units to dominate and effectively meet competition. Various agreements and joint ventures took place between companies in order to expand, for example Bharti and Hutch bought smaller competitors to establish themselves across the nation. Major IPO issues were made in this phase too.

The present **fourth wave** is distinct from the earlier ones in the sense that India has become a force to reckon with in the global arena with abundant foreign exchange and a strong rupee. Indian companies are making their presence felt by attracting investments in the country and also acquiring companies worldwide like the acquisition of Corus by Tata in 2007.Among the Asian countries China and India are proving to be the most attractive target where multinationals are attempting to enter by formulating various deals. Though Taiwan, Pakistan and Vietnam are also progressing, it is India and China which are presently leading the pack in Asia. In an annual survey conducted by economic intelligence unit the interest in India for mergers rose to 39percent from 36percent while for China it declined from 52percent to 47.3percent.[3]

The recent spurt in the economies of the Asian countries has made them a hot destination for investors worldwide. FII's and FDI's have been flowing in at a tremendous rate and therefore major deals are being inked in this region. In the past decade a large volume of mergers and acquisitions have been taking place in Asia by large business houses to take advantage of the boom in the economy. Asian entrepreneurs are making their presence felt by effecting various mergers and acquisitions in Europe and other Western countries.

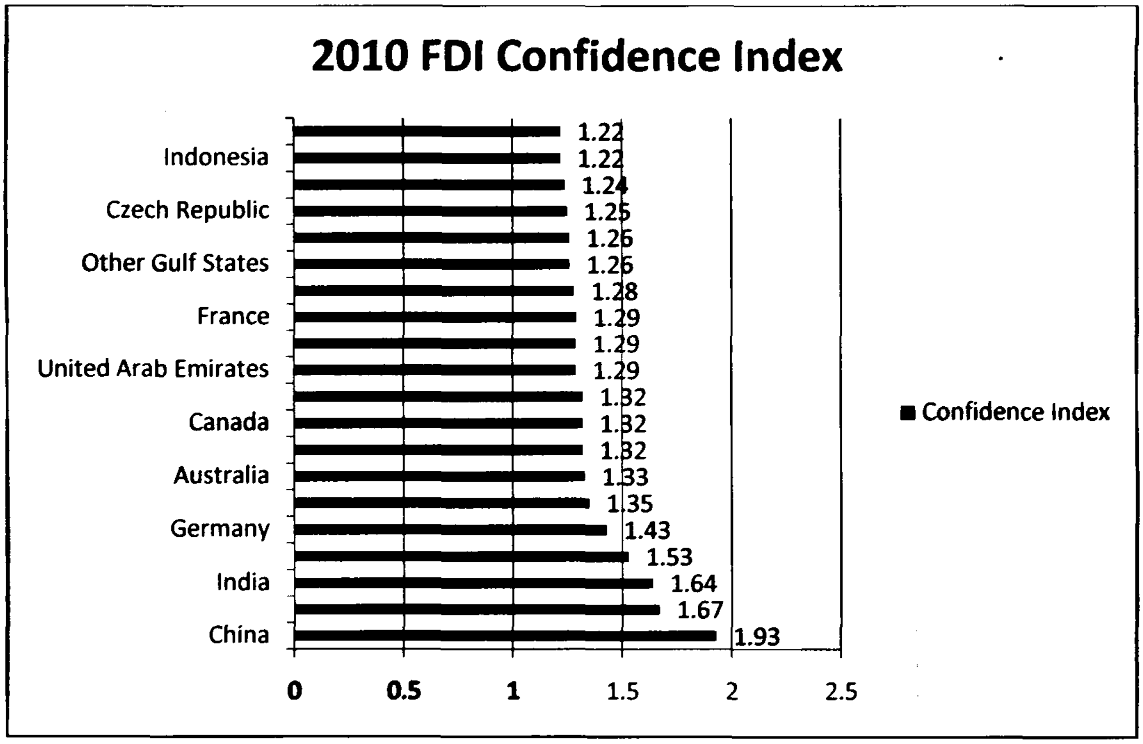
Mergers and Acquisitions (M&A's) in India have taken a huge turnaround, something which was difficult to fathom few years back. It is no longer the usual practice when Multinationals and Transnational Corporations would enter Indian markets by acquiring and merging with firms here. It is the Indian corporate sector which is out on a buying spree and making deep inroads in to the American and European market.

It is one of the fastest growing economies along with China and its sheer economic strength has made it a power to reckon with worldwide.

3.4 Growth of Indian Economy as an Investment Destination

Figure 3.4.1 shows the standing of India as compared with other countries as regards foreign attractiveness where India Ranks third, next only to China and USA in terms of investment destination on the confidence index. It is notable that India had dropped from the second position in 2009 to the third position in the index.[4] However on the global map it still stood at a high position and given the rate at which the economy is growing and the vast untapped potential of the country it is expected to climb up the ladder along with China. On the basis of the large population along with the cheaper raw material, labor and other resources India and China are projected to be the next boom destination due to which investors worldwide are flocking towards them.

Figure 3.4.1: 2010 Confidence Index



Source: Laudicina, Paul et al. (2010) "Investing in the Rebound – The 2010 A.T. Kearney FDI Confidence Index", Global Business Policy Council, A.T Kearney, Virginia, USA

Table 3.4.1 highlights the growth in cross border M&A sales and purchases over the year. The purchases increased from US$ 1million in 1991 to US$ 2649 million in 2005 and US$ 2069 in 2996. However the recessionary forces played a role in the declining purchases to US$ 1610 in 2007 by -22.9percent. It picked up by 16.58percent in 2008. The year 2009 was slated to be positive but the figures here are for six months only. The M&A sales also registered an increase over the years where from US$ 35 million in 1992 they peaked to US$ 4210 in 2005. Here again the recessionary forces had a role in the dip of sales but it recovered well. It slumped to US$ 185 million in 2008 but is expected to recover soon.

Table 3.4.1: Value of Cross-border M&A Sales and Purchases in India

Figures in US Millions of Dollars

	M&A Purchases	Percentage Change over previous year	M&A Sales	Percentage Change over previous year
1991	1		-	
1992	3	200	35	-
1993	219	7200	96	174.2857
1994	109	-50.2283	385	301.0417
1995	29	-73.3945	276	-28.3117
1996	80	175.8621	206	-25.3623
1997	1287	1508.75	1520	637.8641
1998	11	-99.1453	361	-76.25
1999	126	1045.455	1044	189.1967
2000	910	622.2222	1219	16.76245
2001	2195	141.2088	1037	-14.9303
2002	270	-87.6993	1698	63.74156
2003	1362	404.4444	949	-44.1107
2004	863	-36.6373	1760	85.45838
2005	2649	206.9525	4210	139.2045
2006	2069	-21.8951	531	-87.3872
2007	1610	-22.1846	2977	460.6403
2008	1877	16.58385	185	-93.7857
2009*	14	-99.2541	139	-24.8649

Note: For 2009 figures for January to June only
Source: Compiled and calculated from World Investment Reports (1991 to 2009) Retrieved from http://www.unctad.org/Templates/Page.asp?intItemID=1485&lang=1

The above analysis further asserts the fact that India is on a progressive trail to growth where future growth prospects are very bright.[5] A survey[6] which polled 230 financial executives in Asia, Europe, North America and the Middle East, showed interest in India had increased slightly from 37percent in 2005 to 39percent in 2007. By comparison, 47percent executives answered that they expected to execute a merger or buyout in China in the next few years. Among those surveyed, nearly three quarters predicted that their companies would undergo a significant merger or acquisition sometime in the next five years, up from 68percent last year.

3.5 *Rise of Indian Economy as an Acquirer in Mergers and Acquisitions (M&A's)*

The Indian Economy grew at 9percent during the first half of the fiscal year 2007-08 (April-September). In the past two years huge deals have taken place by Indian Companies especially in the Iron and Steel, Energy and Pharmaceutical sectors. In 2006 there were more outbound than inbound deals in 2006 in value terms. Largest portion of outbound acquisitions in Europe (42percent) followed by North America (24percent). The year 2007 was indeed a landmark year that saw the largest acquisition by an Indian Company in the form of Tata-Corus deal. Value of M&A deals reached US$ 44.3 billion spread over 1048 transactions representing growth of over 65percent in value over 2006. "Unlike the European market, the dominant domestic players in the more mature markets in particular areas of Asia, are yet to fully flex their muscles on a regional basis," the report said.[7]

The buoyancy in Indian economy can be attributed to various factors like liberalization, easing of government restrictions, increasing profitability and goodwill of Indian corporate as compared to their foreign counterparts, etc. Riding on this wave, Indian entrepreneurs are aggressively entering the European and American markets and entering into various mergers and acquisition deals 2hich is shown in Table 3.5.1 which highlights major acquisitions made by Indian Companies in various parts of the world.

Table 3.5.1: Major Acquisitions made by Indian Companies Worldwide

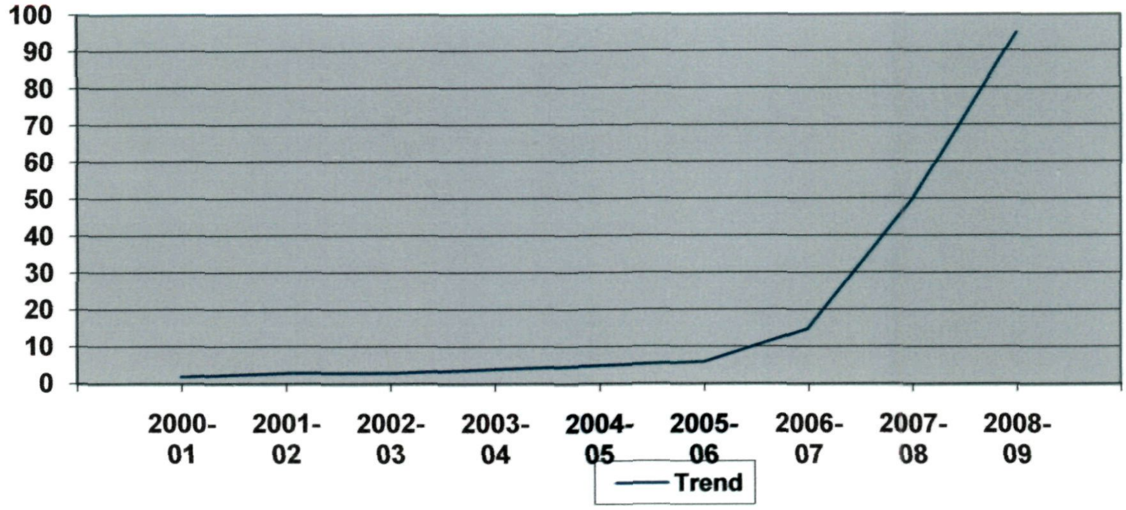
Acquirer	Target Company	Country Targeted	Deal Value ($ millions)	Industry
Videocon	Daewoo Electronics Corp.	Korea	729	Electronics
Dr. Reddy's Labs	Betapharm	Germany	597	Pharmaceutical
Suzlon Energy	Hansen Group	Belgium	565	Energy
HPCL	Kenya Petroleum Refinery Ltd.	Kenya	500	Oil and gas
Ranbaxy Labs	Terapia SA	Romania	324	Pharmaceutical
$Tata Steel	Natsteel	Singapore	293	Steel
Videocon	Thomson SA	France	290	Electronics
VSNL	Teleglobe	Canada	239	Telecom

Source: Indian Mergers and Acquisitions- The changing face of Indian Business Retrieved from http://trak.in/tags/business/2007/08/16/indian-mergers-acquisitions-changing-indian-business/ (16 August, 2007)

Earlier it was the India Information Technology (IT) sector which was forging ahead in terms of global deals but now other sectors are also steadily making their presence felt and taking active part in the globalization process. The top ten deals account for nearly US $ 21500 million which is more than double the amount involved in US company's acquisition of Indian counterparts[8]. This speaks volume of the increasing stature, profitability and cash available with the Indian firms.

From Figure 3.5.1 below we can see that the Indian outbound deals are on the inflexion point and are expected to soar to great heights and break all previous records. From a mild US $ 0.7 billion in 2000-01 it has gone to US $ 4.3 billion in 2005 and further crossed US $ 15 billion in 2006 and expected to reach 50 US $ billion in 2007-08 and 95 US $ billion in 2008—09. These trends justify the current global interest in Indian markets. The year 2006 will however be remembered as a golden period for Indian markets where substantial strategic acquisitions were made worldwide. This comprised 60 percent of the total mergers and acquisitions activity in 2006 and the remarkable fact is that almost 99 percent of acquisitions were made with cash payments which highlights the liquidity of Indian firms.[9]

Figure 3.5.1: Graphical Representation of Indian Outbound Deals since 2000 (US $ billions)



Note: Estimated figures

Source: Indian Mergers and Acquisitions- The changing face of Indian Business Retrieved from http://trak.in/tags/business/2007/08/16/indian-mergers-acquisitions-changing-indian-business/ (16 August, 2007)

An opportunity is also available for Indian enterprises in the ongoing era of global recession where due to serious credit crunch in developed countries, the level of competition has subsided and Indian companies can use their resources to make acquisitions worldwide. Table 3.5.2 below gives a synoptic view of the profile of major India companies making Mergers and Acquisitions (M&A's) and also the major deals affected by them.

Table 3.5.2: Profile of Major Companies making Mergers and Acquisitions Deals

Name of Company	Number of Acquisitions	Timeline	Target Industries	Target Countries	Average Size of Acquisitions
Bennet Coleman& Co	20	6 in 2005, 7 in 2006, 14 in 2007	Automotive, Consumer Goods & Services, Electronics & High Technology, Industrial Equipment, IT Services, Media & Entertainment, Outsourcing, Pharmaceuticals & Healthcare, Retail, Telecommunications	India	US$2.34 million

Ranbaxy Laboratories	16	1 in 1998, 1 in 1999, 1 in 2000, 1 in 2001, 2 in 2002, 1 in 2003, 1 in 2005, 5 in 2006, 3 in 2007	Pharmaceuticals & Healthcare	Belgium, France, Germany, India, Romania, South Africa, Spain, US	US$80.80 million
HCL Technologies	14	1 in 1998, 4 in 2001, 2 in 2002, 2 in 2003, 2 in 2004, 1 in 2005, 1 in 2008	Capital Markets, Consumer Goods & Services, Insurance, IT Services, Telecommunications	India, Thailand, UK, USA	US$43.73 million
Wipro	14	1 in 2000, 2 in 2001, 4 in 2002, 3 in 2003, 3 in 2006, 1 in 2007	Consumer Goods & Services, Energy, IT Services, Pharmaceuticals & Healthcare, Telecommunications	Finland, India, Singapore, US	US$47.85 million
Tata Consultancy Services	11	2 in 2002, 3 in 2004, 3 in 2005, 2 in 2006, 1 in 2007	Capital Markets, Consumer Goods & Services, IT Services	Australia, Brazil, Chile, India, Philippines, Switzerland	US$30.66 million
Hindalco Industries	11	3 in 2000, 3 in 2002, 2 in 2003, 1 in 2005, 1 in 2006, 1 in 2007	Chemicals, Metals & Mining	Australia, India	US$117.41 million
Hindustan Unilever	10	3 in 1999, 4 in 2000, 1 in 2002, 1 in 2003, 1 in 2007	Consumer Goods & Services	India	US$17.28 million
Dr. Reddy's Laboratories	10	1 in 1998, 5 in 1998, 1 in 2000, 1 in 2002, 1 in 2004, 1 in 2006	Pharmaceuticals & Healthcare	Germany, UK, India, USA	US$87.78 million

Source: Accenture Analysis of Thomson Financial Data, "High Performance through Mergers and Acquisitions: India's new dynamics", Accenture, India, 2008. Retrieved from http://www.accenture.com/NR/rdonlyres/9D1FCD86-09BF-4E87-8AD3-10FAD689B22B/0/IndiaMADynamics.pdf

The top eleven deals done by the Indian corporate sector are discussed in the Table 3.5.3.

The Tata-Corus deal worth $12.2 Billion was the largest ever takeover of a foreign company by an Indian company when it took place. The deal also catapulted Tata Steel to the fifth largest steel group in the world and displaying the economic prowess of Indian corporate sector.

After many deliberations Vodaphone finally took over Hutchison-Essar by buying out the controlling 67percent interest. Hindalco's acquisition of Canadian based Novelis made it a global leader in aluminium rolled products and also one of the largest aluminum producers in Asia.Daiichi Sankyo's acquisition of Ranbaxy was the largest ever deal to have taken place in the pharmaceutical sector and it also created the 15th largest drug-maker in the world.

A whopping 96.8percent shareholder of the London listed firm's Imperial Energy accepted the acquisition bid of ONGC whose total number of projects have risen to 39 in 17 countries while it started from a single project in Vietnam. Another major deal was the Japanese telecom giant NTT DoCoMo acquisition of Tata Teleservices in which it picked up a 26 per cent equity stake.

HDFC Bank became the second largest bank in India with its acquisition of the Centurion Bank of Punjab which is also slated as one of the largest mergers in the Indian financial sector.

Close on the heels after acquiring Tata Group again put India on the world map through Tata Motors acquisition of the coveted luxury brands Jaguar and Land Rover from Ford. The acquisition of the German based Repower made Suzlon Energy the largest wind turbine maker in Asia and the fifth largest in the world. Reliance Industries scripted a consolidation through its takeover of its subsidiary Reliance Petroleum (RPL).

The Mergers and Acquisitions (M&A's) story looks large and promises to loom even larger from its current position. A deal is proposed between Bharti and South Africa's MTN which if finalized would be the largest ever deal to have taken place in India amounting to $23 Billion almost double the Tata Corus Deal which was valued at $12.2 billion.

Table 3.5.3: Top 11 Mergers and Acquisitions (M&A's) in India

Year	Acquirer	Acquired	Value of Deal
30 January, 2007	Tata Steel	Corus Group	$12.2 Billion
11 February, 2007	Vodaphone	Hutchison Essar	$11.1 Billion
February 2007	Hindalco	Novelis	$ 6 Billion
June 2008	Daiichi Sankyo	Ranbaxy	$4.5 Billion
January 2009	Oil and Natural Gas Company(ONGC)	Imperial Energy	$2.8 Billion
November 2008	NTT DoCoMo	Tata Teleservices	$2.7 Billion
February 2008	HDFC Bank	Centurion Bank	$2.4 Billion
March 2008	Tata Motors	Jaguar-Land Rover	$2.3 Billion
March 2008	Sterlite	Asarco	$1.8 Billion
May 2007	Suzlon Energy	RePower	$1.7 Billion
March 2009	Reliance Industries(RIL)	Reliance Petroleum(RPL)	$1.68 Billion

Source: India's 11 largest M&A deals. Retrieved from http://business.rediff.com/slide-show/2009/may/29/slide-show-1-indias-11-largest-m-and-a-deals.htm (29 May 2009)

Different sectors have been attracting M&A deals in India including metals, pharmaceuticals, industrial goods, automotive components, beverages, cosmetics and energy in manufacturing; and mobile communications, software and financial services in services, with pharmaceuticals, IT and energy being the prominent ones among these.

3.6 *Industry-wise Analysis of Mergers and Acquisitions (M&A's)*

The industry-wise analysis of mergers and acquisitions in the Indian economy is as follows:

i. Aviation Industry

The major deals in Indian Aviation Industry are highlighted in Table 3.6.1. Jet Airways in its bid to get monopoly in the Indian aviation sector acquired its competitor Sahara for approximately US$ 300 million in a fiercely contested battle which went to the court also for settlement. The other big player Kingfisher also consolidated its position with the acquisition of the low cost airline Deccan for approximately US$ 5.5 billion. Indian Airline was formed through the merger of Deccan airways, Airways-India, Bharat Airways, Himalayan Aviation, Kalinga

Airlines, Indian National Airways; Air Services of India after the legislation to nationalize airlines was passes in 1953. In 2007 Air-India and Indian airlines were merged and the new entity was named as Indian in a bid to save the loss making enterprise.

Table 3.6.1: M&A in Indian Aviation Industry

Acquiring Company	Acquired Company	Year of deal	Value of deal
Jet airways	Sahara	2007	Rs 1450 crore or US$ 300 million (approx)
Kingfisher	Deccan	2007	Rs 550 crore Or US$ 5.5 billion
Air India	Indian Airlines	2007	

Source: Compiled from Various Business Dailies, Reports, Annual Reports, Websites and Articles[10][11][12]

ii. Telecommunication Industry

The M&A's activity trend in this sector has particularly seen a remarkable increase in recent period. The vibrant activity is boosted by the ease in government regulations as regards de-licensing, de-regulation, advent of modern technologies and services etc.

The first M & A deal in this sector as shown in Table 3.6.2 was between Max Group of Delhi and Hutchison Group of Hongkong where 41percent stake of Orange was acquired by the latter in 1998. In 2003 Sterling Group acquired Aircel Chennai from RPG group by acquiring 79.24percent stake in it. The trend continued with the acquisition of Idea Cellular in 2005 by Aditya Birla Group in 2005 from the Tata Group. The year 2007 saw a major deal where global Telecom giant Vodaphone acquired Hutchison with intentions to tap the rural market, expand infrastructure and also increase the number of mobile users in the country. Having lost the bid for Hutchison Reliance Communications went on to acquire the US based Yipes Holdings in 2007 in a move to be a global communications leader and provide a platform for global service delivery with wide coverage and capability. Etisalat based in Arab and the second largest company based on market values acquired a 45percent stake in Swan Telecom Private Ltd for YS$ 900 million in 2008. Telenor which is based in Norway and is the seventh largest phone firm on the basis of number of customers made an entry in the growing Indian market through a merger with Unitech wireless for US$ 1.23 billion. Quippo Telecom which is the world largest independent telecom infrastructure company acquired Tata Tele Services for US$ 533.33 million. The alliance with the Japanese firm DOCOMO which was a leader in mobile services in the world was expected to provide Tata with cutting edge technology and DOCOMO got access to the expanding Indian market.

Table 3.6.2: M&A in Indian Telecom Industry

Company/Service Name	Buyer	Seller	Year	Deal size (US$)
Orange, Mumbai	Hutchison Group, Hong Kong	Max Group, Delhi	1998	560 million
Aircel, Chennai	Sterling Group, Chennai	RPG Group	2003	210 crore
Idea Cellular	Aditys Birla Group	Tata Group	2005	Na
Hutch Essar	Essar Group	Max India	2005	146 million
Hutch, India	Max India	Kotak Mahindra, India	2006	225 million
Hutch Essar, India	Hutchison Group, Hong Kong	Hinduja	2006	450 million
Aircel, TN, Chennai and NE	Maxis, Malaysia	Sterling Group	2006	750 million
Hutchison Essar	Vodaphone		2007	11.1 billion
Reliance Communication	Yipes		2007	300 million
Emirates Telecommunication Corp (Etisalat)	Swan Telecom Private Limited		2008	US$ 900 million
Telenor	Unitech Wireless		2009	US$1.23 billion
Quippo Telecom	Tata Tele Services		2009	US$ 533.33
DOCOMO	Tata Tele Services		2009	127.4 billion Indian Rs

Source: Compiled from Various Business Dailies, Reports, Annual Reports, Websites and Articles [13][14][15]

iii. Pharmaceutical Industry

Another area of growth in the sphere of mergers and acquisitions is slated to be the pharmaceutical sector. The pharmaceutical industry is expected to grow by more than 13 per cent to $6.5 billion in 2007 and reach a market size of $9.5 billion by 2010, surpassing the growth trends of 9.5 per cent recorded over the last 5 years[16]. The Indian pharmaceutical market known for its cost-effectiveness, generics, competitiveness and huge size is attracting global players worldwide and Indian companies are also expected to capitalize on acquisition opportunities worldwide especially in the regulated market of USA.

Table 3.6.3 enlists the major M&A's in the Pharmaceutical Industry in India. Fastest growing pharmaceutical company, Sun Pharmaceuticals acquired Able Laboratories in 2005 in order to strengthen its presence in the US generic market. It further went on to acquire the loss ridden multinational generic producer Taro in 2008 which had operations in US, Israel and Canada. In the biggest overseas acquisition by an Indian pharmaceutical company Dr. Reddy's acquired Betapharm, fourth largest German drug company in 2006 which gave the former a chance to establish its presence in all key markets. The acquisition of Be-Tabs made Ranbaxy, which was its fourth major acquisition in 2006, the fifth largest pharmaceutical company in South Africa. The Japanese firm Daiichi Sankyo acquired a major stake in Ranbaxy in India for US$ 4.2 billion. Fresenius Kabi (Singapore) which is a global health care group acquired a major stake in Dabur Pharma for Rs 1000 crore. Abbot of USA acquired Mumbai based Wockhardt to accelerate its nutrition business in India.

Table 3.6.3: M&A in Indian Pharmaceutical Industry

Acquiring company	Acquired company	Year of deal	Value of deal
Sun Pharmaceuticals	Able Laboratories	2005	US$ 23.15 million
Dr. Reddy's Laboratories	Betapharm	2006	US$ 570 million
Ranbaxy Laboratories	Be-Tabs	2006	US$ 70 million
Wockhardt	Negma Laboratories	2007	US$ 26 million
Julian Organosys	Hollister Steir Laboratories	2007	US$ 122.5 million
Zydus Cadila	Nikkho	2007	US$ 26 million
Sun Pharmaceuticals	Taro	2008	US$ 454 million
Daiichi Sankyo	Ranbaxy	2009	US$4.2 billion
Sanofi Pasteur	Shantha Biotechnics	2009	US$664.89 million
Fresenius Kabi	Dabur Pharma	2009	Rs 1000 crore
Abbot	Wockhardt		US$ 130 million

Source: Compiled from Various Business Dailies, Reports, Annual Reports, Websites and Articles [17], [18], [19]

iv. Cement Industry

Recent years have seen various MNC's entering India and making a foray in the cement sector. The market is expected to expand considerably in the future as well and to meet the surge in demand consolidations and restructuring would be required in the industry. The major deals are discussed in Table 3.6.4

In order to strengthen its presence in India, Italcementis Group of Italy, fifth largest producer in the world acquired Zuari cement, its joint venture in India. Purchase of a stake in Gujarat Ambuja Cements Ltd in 2005 gave Holcim to establish itself in the Indian subcontinent and also opened windows for further growth and expansion. Aditya Birla Group, eighth largest cement producer in the world acquired L&T cement and named it Ultratech cement making it the third big cement brand of the flagship Grasim Industries. While India cement mergerd its subsidiary visaka Cement in 2007, the ,merger between Ultra Tech and Samruddhi cement in 2009 created the tenth largest cement company in the world and largest in India.

Table 3.6.4: M&A in Indian Cement Industry

Acquiring Company	Acquired Company	Year Of Deal	Value Of Deal
Lafarge S.A	Bleu Circle Industries	2000	Rs 785 crore
Ital Cement	Zuari Cement	2000	Rs 370 crore
Holcim	Ambuja Cement India Ltd	2005	Rs 27.3 billion
Aditya Birla Group	L&T cement division		
India Cement	Visaka Cement	2007	1 equity share of Indian cement for every 10 shares of Visaka cement
Ultra tech	Samruddhi Cement	2010	4 shares of ultra Tech for every 7 shares of Samruddhi

Source: Compiled from Various Business Dailies, Reports, Annual Reports, Websites and Articles [20][21]

v. Automobile Industry

The Indian auto component industry is likely to almost double to $18.7 billion by 2009 and reach about $40 billion by 2014. Further, India is expected to move ahead of the UK and Canada as a car-producing country by 2008. Its car production capacity is expected to surpass 2 million units by 2008 from the current capacity of more than 1.4 million units. It has already surpassed Korea to become the third largest car market in Asia-Pacific after China and Japan[22]. Table 3.6.5 depicts the first ever overseas acquisition by Indian automobile company Tata motors, the sixth largest commercial vehicles manufacturer in the world which acquired Daewoo in 2004. Another automobile giant of India, Mahindra and Mahindra (M&M) entered into a joint venture with Jiangling Motor Corporation Group in 2004 to roll out the first M&M branded tractor in China. Sakhti Auto Components got an opportunity to enter the European market with the acquisition of Intermet Europe in2007 and also got access to the latter's technology. M&M went onto acquire Punjab Tractors Limited and decided to let its brand Swaraj Mazda to exist separately in 2007. Tata motors created history by acquiring luxury brands Jaguar and Land Rover from Ford Motors establishing themselves as takeover tycoons. The merger with Mahindra and Mahindra (M&M) which is among the top industrial houses of India opened avenues for growth and expansion for Punjab Tractors Limited (PTL) which was its subsidiary.

Table 3.6.5: M&A in Indian Automobile Industry

Acquiring company	Acquired company	Year of deal	Value of deal
Tata	Daewoo Commercial Vehicle	2004	Rs 465 crore
Mahindra and Mahindra (M& M)	Jiangling Motor Corporation Group	2004	
Tata Motors	Hispano Carrocera SA	2005	Rs 70crore
Sakhi Auto Components	Intermet Europe	2007	US$ 129 million
Mahindra and Mahindra (M& M)	Swaraj Mazda	2007	US$ 154 million
Tata Motors	Jaguar and land Rover	2008	US$ 2.3billion
Mahindra and Mahindra (M&M)	Punjab Tractors Limited (PTL)	2009	1 share of MandM for every 3 shares of PTL

Source: Compiled from Various Business Dailies, Reports, Annual Reports, Websites and Articles[23][24]

vi. Energy Industry

Energy sector has been predominantly regulated and owned by government agencies. The energy sector is undergoing restructuring in the wake of liberalization process. Of late it is witnessing the entry of the entry of private players. Economic growth largely depends on availability of energy inputs at economical prices. It is expected to be laced with cross border merger and competition issues in the future in the backdrop of opening up of the sector.[25]

The major deals in this Industry are highlighted in Table 3.6.6. With an increased global demand for green power projects Suzlon Energy and Repower Systems merged in 2007, as a result of which both companies were in a stronger position to derive synergy benefits from the collaboration. The acquisition of the Italian company Sofinter gave Gammon India a stronghold over the value chain in power and access to superior technology. Through its foreign company OVL, ONGC got hold of Imperial Energy of UK. The number of overseas projects increased from 17 to 39 in seven years for ONGC with the help of support from the government. The acquisition of BP Energy Private limited by Green Infra Ltd made it a big name in the renewable energy sector

Table 3.6.6: M&A in Indian Energy Industry

Acquiring company	Acquired company	Year of deal	Value of deal
Tata Power Company	PT Kaltim Prime Coal and PT Arutim	2007	US$ 1.1 billion
Suzlon Energy	Repower Systems	2007	US$ 1.35 billion
Indian Oil and Oil India Ltd.	Suntera (Nigeria)	2007	US$ 60 million$
Gammon India	Sofinter	2008	Euro 50 million
ONGC	Imperial Energy	2008	US$ 1.9 billion
Tata Power	Geodynamics	2008	US$ 37.5million
Green Infra	BP Energy	2009	

Source: Compiled from Various Business Dailies, Reports, Annual Reports, Websites and Articles[26][27][28]

vii. Technology Industry

Asia and in particular India has been playing a significant role in this sector both on the domestic and international front. In the year 2007 a tenfold increase in the value of Asian forays into North America were witnessed. The domestic technology market in Asia has developed by leaps and bounds which saw the M&A's activity in India increase by a significant73percent. Europe also saw Asian acquisitions increase by three fold in value and this trend is expected to continue in future also.[29]

Table 3.6.7 highlights major deals in this industry. Polaris and Orbitech merged in 2002 to provide a diversified portfolio of services and access to a library of several hundred proven banking solutions components. It has created the fifth largest listed Indian IT Company. As a part of its strategy to focus on off-shore development Mascot Systems acquired e-Jiva and its Hyderabad based exclusive off shore services provider Aqua Regia Technologies in 2002. The acquisition of Cognitive Arts gave

NIIT an access to US corporate knowledge solutions market. Tech Mahindra acquired Satyam after winning the bidding with the hope to gain from Satyam's experience and geographical presence.

Table 3.6.7: M&A in Indian Technology Industry

Acquiring company	Acquired company	Year of deal	Value of deal
Polaris	Orbitech	2002	ND
Mascot Systems	e-Jiva	2002	US$ 9.46 million
Mascot Systems	Aqua Regia Technologies	2002	US$ 0.5 million
NIIT	Cognitive Arts	2003	ND
Tech Mahindra	Satyam	2009	US$ 576 million

Source: Compiled from Various Business Dailies, Reports, Annual Reports, Websites and Articles[30][31][32]

viii. Beverages Industry

Future developments in this sector consists of newer economies like Brazil, Russia, India and China which are expected to act as a stimulus and driver for growth of the drinks industry in future. Table 3.6.8 highlights major deals in this sector. Acquisition of Willianson Tea Assam by Mc Leod Russel India made the latter the largest producer of bulk tea in India. The purchase of Shaw Wallace brands which operate in volume segment in 2005 contributed to United Spirits which is currently the third largest distiller in the world. Further the acquisition of Whyte Mackay filled the lacuna of a scotch whisky brand in the portfolio of brands for United Spirts.

Table 3.6.8: M&A in Indian Beverages Industry

Acquiring company	Acquired company	Year of deal	Value of deal
Mc Leod Russel India	Willianson Tea Assam	2005	Rs 2.1 billion
United Brewery Group	Shaw Wallace	2005	Rs 16.2 billion
Tata Coffee	Eight 'o' Clock Coffee Company	2006	US$ 220 million
United Spirits	Whyte Mackay	2007	US$ 1.6 billion

Source: Compiled from Various Business Dailies, Reports, Annual Reports, Websites and Articles[33][34]

Table 3.6.9 enlists the Mergers and Acquisitions (M&A's) of Tata Group which is one of the biggest and most successful business groups in India

Table 3.6.9: Mergers and Acquisitions (M&A's) of Tata Group

Tata company	Acquired Company	Country	Stake acquired	Value	Year
Indian Hotel	Starwood Group (W Hotel)	Sydney	100 per cent (wholly owned)	USD 29 million	December 2005
	The Pierre	US	USD 9 million	Lease of property	July 2005
	Regent Hotel (renamed Taj Lands End)	India	Effective 100 percent stake	Rs 450 crore	September 2002
	Campton Palace Hotel	US		US$ 58 million	April 2007
Tata Autocomp Systems	Wundsch Weidinger	Germany		Euro 7 million	September 2005
Tata Chemicals	General Chemical Industrial Products	US	100 percent stake		January 2008
	Brunner Mond	UK	63.5 per cent	Rs 508 crore	December 2005
			36.5 per cent	Rs 290 crore	March 2006
	Indo Maroc Phosphore S.A (IMACID)	Morocco	Equal partner	USD 38 million (Rs 166 crore)	March 2005
	Hind Lever Chemicals	India	Amalgamation		June 2004
Tata Coffee	Eight 'O Clock Coffee Company	US	100 per cent (wholly owned)	USD 220 million (Rs 1015 crore)	June 2006
Tata Consultancy Services	Citigroup Global Services	US	100 per cent	US$ 512 million	December 2008
	Tata Infotech	India			February 2006
	Comicrom	Chile			November 2005
	Pearl group	UK	Structured deal		October 2005
	Financial Network	Australia			October 2005

	Services				
	Phoenix Global Services	India			July 2004
	Aviation Software	India			March 2004
	Development Consultancy India (ASDC)				
	Airline Financial Support Services	India			January 2004
Tata Industries	Indigene Pharmaceuticals Inc	US	< 30 per cent	Not disclosed	July 2005
Tata Interactive	Tertia Edusoft Gmbh	Germany	90 per cent	Not disclosed	January 2006
	Tertia Edusoft AG	Switzerland	90.38 per cent		
Tata Metaliks	Usha Ispat, Redi Unit	India	100 per cent (wholly owned)	Rs 115 crore	January 2006
Tata Motors	Hispano Carrocera SA	Spain	Remaining 79 per cent		October 2009
	Jaguar and Land Rovers brands	UK		$2.3 billion approximately	March 2008
	Tata Finance	India	Merger		April 2005
	Hispano Carrocera	Spain	21 per cent	Euro 12 million (Rs 70 crore)	February 2005
	Daewoo Commercial Vehicle Company	Korea	100 per cent (wholly owned)	KRW120 billion (USD 102 million, Rs 465 crore)	March 2004
Tata Projects	Geodynamics	Australia	10 per cent	$37.5 million	September 2008
	Acquired Coastal Gujarat Power	India			April 200
	PT Kaltim	Indonesia	30 per cent		June 2007

	Prima Coal and PT Arutmin Indonesia		equity stake		
Tata Projects	Artson Engineering	India			January 2008
Tata Steel	Rawmet Industries	India		Rs 101 crore	March 2007
	Millenium Steel	Thailand	67.11 per cent	USD 167 million (Baht 6.5 million)	April 2006
	Natsteel Asia	Singapore	100 per cent (wholly owned)	S$468.10 million	February 2005
	Corus	UK	100 percent		January 2007
Tata Sons	VSNL	India			February 2002
Tata Sons(TCS)	Computer Maintenance Corporation	India			November 2001
Tata Sons through Tata Ltd and Tata Tea through TTGB Investments	Energy Brands Inc	US	30 per cent	USD 677 million	October 2006
Tata Tea and Tata Sons	Tetley Group	UK	100 per cent (wholly owned)	GBP 271 million	February 2000
Tata Tea through Tata Tea (GB)	Joekels Tea Packers	South Africa	33.3 per cent	GBP 0.91 million	September 2006
ATata Tea through Tata Tea(GB)	Good Earth Corporation & FMali Herb Inc	US	100 per cent (wholly owned)	USD 31 million	October 2005
Tata Tech	INCAT International	UK			August 2005

Tata Teleservices	Hughes Telecom (India)	India	50.83 per cent	Rs 858.83 crores	December 2002
Telco Construction Equipment Company (Telcon)	Serviplem SA	Spain	79 per cent		March 2008
	Lebrero SA	Spain	60 per cent		March 2008
Trent	Landmark	India	76 percent	USD 24.09 million (Rs 103.60 crore)	August 2005
VSNL	Tata Power Broadband	India			September 2005
	Teleglobe International	US			July 2005
	Tyco Global Network	US			November 2004
	Dishnet DSL's ISP division	India			March 2004
	Gemplex	US			July 2003
TRF	Hewitt Robins International	UK		£3 million	April 2010
	Dutch Lanka Trailer Manufacturers	Sri Lanka	51 per cent	$8.67 million	July 2009
	York Transport Equipment (Asia)	Singapore	51 per cent stake		October 2007
Voltas	Rohini Industrial Electricals	India	51 per cent	Rs62 crore	August 2008

Source: Tata, Mergers and Acquisitions, Retrieved from http://www.tata.com/0_about_us/tatam&as.htm#top

3.7 Impact of Recession on Mergers and Acquisitions (M&A's)

The global economic crisis which hit USA in 2007 had repercussions on economies worldwide. In India the focus shifted back to making domestic deals with the global markets in disarray. In 2009 there were approximately deals worth 10 billion dollars and 60percent of them constituted domestic transactions. Even the foreign buyers were lured into some sectors by the strong economic fundamentals of India[35].

Table 3.7.1 defines the impact of recession where the number of deals fell by -32.84percent and value of deals by 39.44percent in 2008. The fall to -41.19percent in terms of number of deals and 67.59 percent in 2009 further highlights the recessionary impact.

Table 3.7.1: Grant Thornton Report on Impact of Recession on Mergers and Acquisitions

Year	Number of Deals	Percentage Change	Value of Deals	Percentage Change
2007	676	-	51.11	
2008	454	-32.84	30.95	-39.44
2009	267	-41.19	10.03	-67.59

Source: "India Inc looks within for Merger & Acquisitions" Retrieved from http://business.rediff.com/report/2009/dec/30/india-inc-looks-within-for-merger-and-acquisitions.htm (30 December 2009)

Economies worldwide have been in the grip of serious recession since the end of the year 2007 and its impact is visible in the form of decreasing growth rates, shrinking economies, fall in unemployment, fall in demand and consumption and other economic parameters which are depicting a downswing. Table 3.7.2 highlights that while the domestic deals fell by -46.73percent the value of the deals had actually increased by 78.60percent in 2008. In terms of cross border deals the number of deals fell by -22.82 and value by -46.81percent in 2008. The inbound deals fell by a larger percentage that is -27.68percent against –20.58percent of outbound deals in 2008 as regards volume of deals. In terms of value the outbound deals suffered more with a fall of -59.86percent against a -19.48percent fall in inbound deals in 2008. The total M&A"s fell by -34.17percent and PE Investment by -24.44percent in terms of number. In terms of value total M&A"s fell by -39.89percent and PE Investment by -45.24percent. The total fall for M&A and PE investment was -30.53percent in terms of number and -41.36percent in terms of value.

Hence it is concluded that the fall in recession had a greater impact on the value of mergers and acquisitions deals as compared to the number of deals.

Table 3.7.2: Mergers and Acquisitions (M&A's) Deals after Recession

Year	Volume (Number)			Value (US$ Billions)		
	Volume 2007	Volume 2008	% Change	Value 2007	Value 2008	% Change
I. Domestic Deals	321	171	-46.73	2.85	5.09	78.60
II. Cross Border	355	274	-22.82	48.26	25.63	-46.81
a) Inbound	112	81	-27.68	15.50	12.48	-19.48
b) Outbound	243	193	-20.58	32.76	13.15	-59.86
III. Total M&A's (I +II)	676	445	-34.17	51.11	30.72	-39.89
IV. PE Investment	405	306	-24.44	19.03	10.42	-45.24
Total (III +IV)	1081	751	-30.53	70.14	41.13	-41.36

Source: Economic and Political Weekly, 2009, pp. 57-62. Retrieved from http://www.epwrf.res.in/upload/MER/mer10906008.pdf

Table 3.7.3 is symbolic of the deep impact the ongoing financial crisis has had on deals that have taken place in India in the first half of the financial year 2009. The inbound and domestic deals increased at the rate of 10percent in 2009. There was a drastic drop in outbound deals by a percentage of -22percent largely to the gloomy economic outlook prevalent and loss of liquidity. Also the depreciation of the exchange rate of rupee means that outbound deals would lead to a further loss of valuable foreign exchange. The number of deals fell by -53.58percent to 136 in 2009 while the value of deals crashed by -73percent which in itself tell the story about the fall in rate of deals involving Mergers and Acquisitions (M&A's).

Table 3.7.3: Mergers and Acquisitions (M&A's) in India in the year 2009

Particulars	H1 2008 (First 6 months of 2008)	H1 2009 (First 6 months of 2009)	% Change
1. Percentage of Deals	100%	100%	-
a. Inbound Deals	15%	25%	10
b. Outbound Deals	45%	23%	-22
c. Domestic Deals	40%	52%	12
2. Number of Deals	293	136	-53.58
3. Value of Deals	US$20 billion	US$5.4 billion	-73

Source: Chaudhry, Deepti "Mergers and acquisitions in first half of 2009 worst in five years" Retrieved from http://www.livemint.com/2009/07/20223600/Mergers-and-acquisitions-in-fi.html, (20 July, 2009)

3.8 Conclusion

The Chapter has given a detailed overview of the major Mergers and Acquisitions (M&A's) in India and abroad by India Companies. In this Chapter the Researcher makes an attempt to trace the growth of the Indian economy and entrepreneurs over the years. The financial growth of the Indian economy is reflected in the number and value if deals through which the Indian economy has left an imprint worldwide where it is accepted and recognized as a major investor. In its bid to expand, grow and acquire technological and other related skills the Indian entrepreneurs have been on an acquisition spree.

Having traced the economic scenario for Mergers and Acquisitions (M&A's) in India the next Chapter sheds light on the consolidation scene in the global economy.

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Chapter 4

International Mergers and Acquisitions (M&A's): An Insight

Chapter 4:

International Mergers and Acquisitions (M&A's): An Insight

4.1 Introduction

The previous chapter provided an insight into the Mergers and Acquisitions (M&A's) scenario in India. It showcased the major merger and acquisition deals that have been taken place in India. In this chapter the Researcher makes an attempt to study the global economic scenario from the point of mergers and acquisitions (M&A's). The recent growth in the number of deals is studied in general and also in various sectors and economies. The motivation behind structuring mergers and acquisitions (M&A's) is also deliberated at length. It is followed by a description of major deals that have taken place in the recent past in prominent sectors. In the end impact of recession and future prospects related to M&A's in the global scenario are discussed..

4.2 Global Mergers and Acquisitions (M&A's): An Insight

With a wave of globalization sweeping all over the world there was a tendency among firms to make forays into newer markets, as an opportunity to expand and also to survive and sustain the competition from global onslaught. In the backdrop of increased foreign investments, liberalization and greater cooperation between economies all over the world, Mergers and Acquisitions (M&A's) emerged as a potent, viable and strategic tool for corporate entities. As a result Mergers and Acquisitions (M&A's) were undertaken on an extensive scale by firms both at the domestic and international level. In the present era cross-border Mergers and Acquisitions (M&A's) are the most common mode of foreign direct investment as a result of which transnational corporations are emerging as dominant forces in the changed global scenario. These are instrumental in increasing the pace at which corporate restructuring is taking place globally. They are recorded as elements and responses of such restructuring. Elements in the sense that they result in further change in the economic scenario and response in the sense that these structural changes have a close relation with the merger and acquisition activity[1].

A look at the international scene reveals that, between1988-95, the value of all cross border Mergers and Acquisitions (M&A's) doubled to $229 billion, including those involving portfolio investments. It was USA which was dominating the scene of cross border Mergers and Acquisitions (M&A's) by 1995 with $49 billion worth of sale and and38 billion worth of purchase in that year. Mainly it was the energy distribution, telecommunications, pharmaceuticals and financial services industry which were dominating the scene in cross-border Mergers and Acquisitions (M&A's). The small, medium sized and services related enterprises were playing increasingly active role in Mergers and Acquisitions (M&A's). The FDI surge was boosted by Mergers and Acquisitions (M&A's) by 1995 while it was earlier hit by recession in the early 1990's[2]

Table 4.2.1 analyses the Cross-border mergers that took place in the period 1991-2008 valued at over US$1 billion. In the year 1991 there was a sharp decline recorded where the number of deals fell by a huge 269.23percent and the value by 62.37percent. The rate of decline decreased in the following year to 7.69percent and 24.44percent regarding the number of deals and value respectively. The scenario of mergers was back to boom with marked increases being recorded in both the aspect of number and value of deals. In 2001 however, again a downfall was recorded which extended till the year 2003 where the number of deals fell by 25.71percent and the value by 30.67percent. From the year 2004 onwards again an increase was reported. The year 2007 was very conducive for mergers with an increase of 48.37percent being recorded in the number of deals and 68.31percent in terms of value of deals. By the end of 2007, the entire global economy was in the midst of severe financial recession. With banking crisis and liquidity crunch to deal with, the momentum of mergers was sure to take the brunt. As a result the number of deals fell by 21.32percent and value of deals fell by 31.25percent in 2008. For the year 2009 the figures taken for consideration are from January to June only. Hence, it is not fair to compare the percentages. The global economy is back on the recovery stage and the number and value of deals is expected to increase. The scenario of recession can also be exploited as an opportunity, where the valuations of the company are at a low and it may be cheaper to carve out a merger or acquisition deal. In the recent times it is the global crisis of a financial, economic or political nature which has posed as a deterrent in this regard. The rate of increase of M&A's is expected to be back on track with the recovery of the economy.

Table 4.2.1: Cross-border M&A's valued at over $1 billion, 1987–2009*

Year	Number of Deals	Percentage Increase over previous year	Percentage of Total	Value ($ billions)	Percentage Increase over previous year	Percentage of Total
1987	19	-	1.6	39.1		40.1
1988	24	26.32	1.3	53.2	36.06	38.7
1989	31	29.17	1.1	68.2	28.20	40.8
1990	48	54.84	1.4	83.7	22.73	41.7
1991	13	-269.23	0.3	31.5	-62.37	27.0
1992	12	-7.69	0.3	23.8	-24.44	21.0
1993	18	50	0.5	37.7	58.40	30.5
1994	36	100	0.8	72.6	92.57	42.5
1995	44	22.22	0.8	97.1	33.75	41.9
1996	48	9.09	0.8	100.2	3.19	37.9
1997	73	52.08	1.1	146.2	45.91	39.4
1998	111	52.06	1.4	408.8	179.62	59.0
1999	137	23.42	1.5	578.4	41.49	64.0
2000	207	51.09	2.1	999.0	72.72	74.0
2001	137	-33.82	1.7	451.0	-54.85	61.7
2002	105	-23.36	1.6	265.7	-41.09	55.0
2003	78	-25.71	1.2	184.2	-30.67	44.8
2004	111	42.31	1.5	291.3	58.14	51.5
2005	182	63.96	2.1	569.4	95.47	61.3
2006	215	18.13	2.4	711.2	24.90	63.6
2007	319	48.37	3.0	1197	68.31	70.4
2008	251	21.32	2.6	823	31.25	68.3
2009*	40	84.41	1.2	171	79.22	67.2

Source: Collected and Compiled from World Investment Report 2009, Transnational Corporations, Agricultural Production and Development, United Nations Conference on Trade and Development, United Nations Publication, Sales No. E.09.II.D.15, New York and Geneva, 2009
*Note: * January-June only.*

Table 4.2.2 gives sector-wise sales of cross border merger and acquisition sales that have taken place in various economies. It shows that overall it is the manufacturing and services sector which is accounting for most of the merger and acquisitions taking place all over the world. It highlights the number of deals in various sectors in the year 2007. The numbers of deals in the primary sector are the highest for the transition economies followed by the developing economies. It is lower in the case of the world and developed economies. The deals are higher in the manufacturing sector for the world and developed economies as compared to the developing economies. It is lowest for the transition economies. The number of deals is high for the developing economies and transition economies as regards service sector are concerned. The share of service sector is the highest among the various sectors for the world and developed economies as well.

Table 4.2.2: Cross-border M&A Sales, by Sector and by Group of Economies (2007)

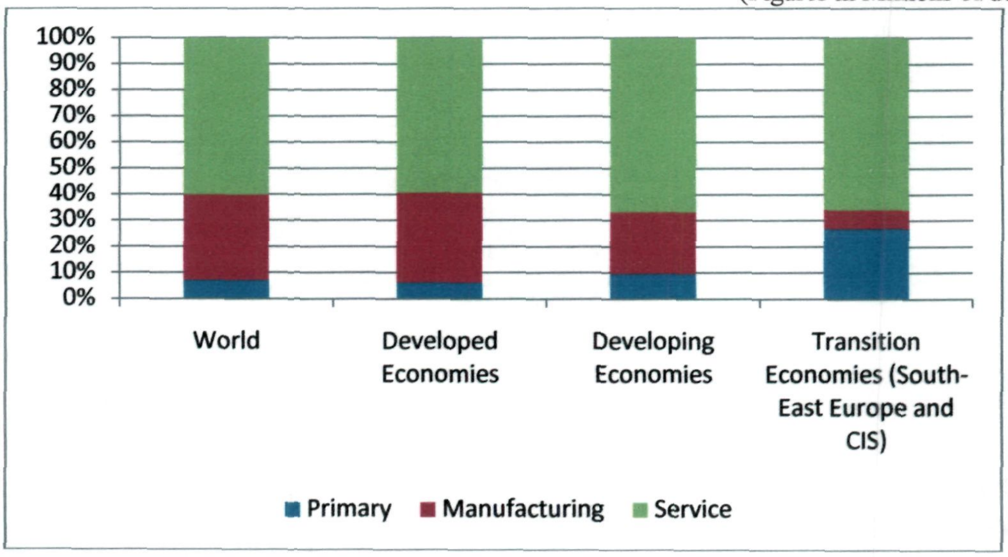
(Figures in Millions of dollars)

2007				
Group of Economies	**All Industries**	**Primary**	**Manufacturing**	**Service**
World	1031100	73299	336310	621491
Developed Economies	903430	55806	311264	536360
Developing Economies	96998	9268	22859	64871
Transition Economies (South-East Europe and CIS)	30671	8225	2187	20259

Source: Collected and Compiled from World Investment Report 2009, Transnational Corporations, Agricultural Production and Development, United Nations Conference on Trade and Development, United Nations Publication, Sales No. E.09.II.D.15, New York and Geneva, 2009

Figure 4.2.1: Cross-border M&A Sales, by Sector and by Group of Economies (2007)

(Figures in Millions of dollars



Source: Table 4.2.2

For the year 2008 as per Table 4.2.3 the share of primary sector in terms of Mergers and Acquisitions (M&A's) deals is lowest for developing economies while it is low for the developed economies, world and transition economies as well. There is a sharp increase in the share of the manufacturing sector in terms of Mergers and Acquisitions (M&A's) deals in the world and the developed economies. In case of developing economies as well the share of manufacturing sector is substantial while it is comparatively the lowest for transition economies. In case of cross border Mergers and Acquisitions (M&A's) the share of services is highest for the transition economies followed by the developing economies. It is substantial but still low for the world and developed economies.

Table 4.2.3: Cross-border M&A Sales, by Sector and by Group of Economies 2008

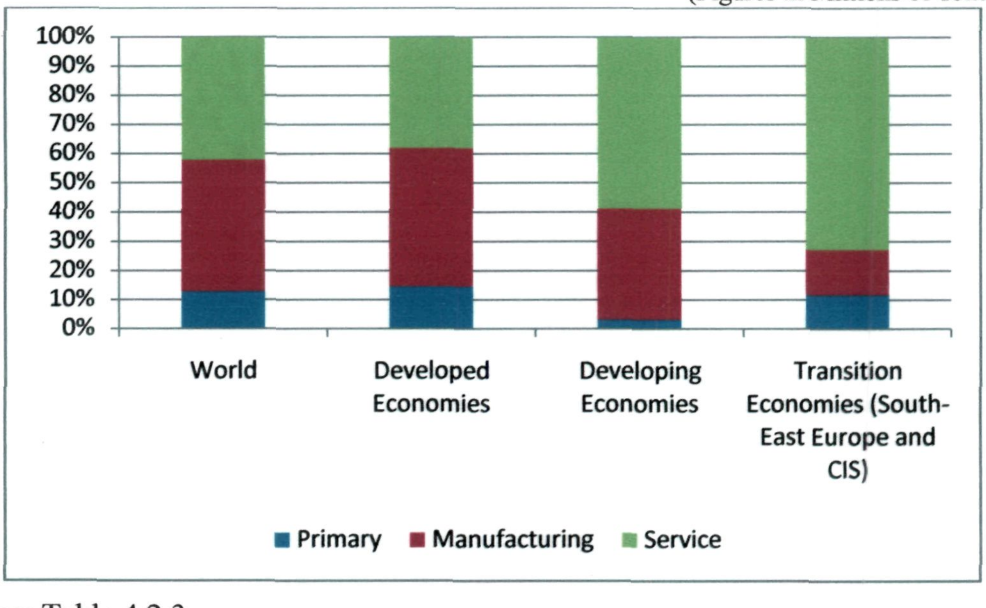
(Figures in Millions of dollars)

2008				
Group of Economies	**All Industries**	**Primary**	**Manufacturing**	**Service**
World	673214	86101	302582	284531
Developed Economies	551847	80514	261139	210194
Developing Economies	100862	3186	38273	59403
Transition Economies (South-East Europe and CIS)	20505	2401	3169	14934

Source: Collected and Compiled from World Investment Report 2009, Transnational Corporations, Agricultural Production and Development, United Nations Conference on Trade and Development, United Nations Publication, Sales No. E.09.II.D.15, New York and Geneva, 2009

Figure 4.2.2: Cross-border M&A sales, by sector and by Group of Economies (2008)

(Figures in Millions of dollars



Source: Table 4.2.3

Table 4.2.4 and Figure 4.2.3 highlight that the share of primary sector in terms of cross border M&A deals is low in the case of the world, developed economies and the developing economies. It is low for the transition economies as well but as compared to other economies it is on the higher side. There is a surge in the deals for the manufacturing sector in the transition economies and its share is comparatively lower for the world, developed and developing economies. The share of service sector is highest in all the economies; the world, developed economies, developing economies and transition economies as well.

Table 4.2.4: Cross-border M&A Sales, by Sector and by Group of Economies 2009(First Half)

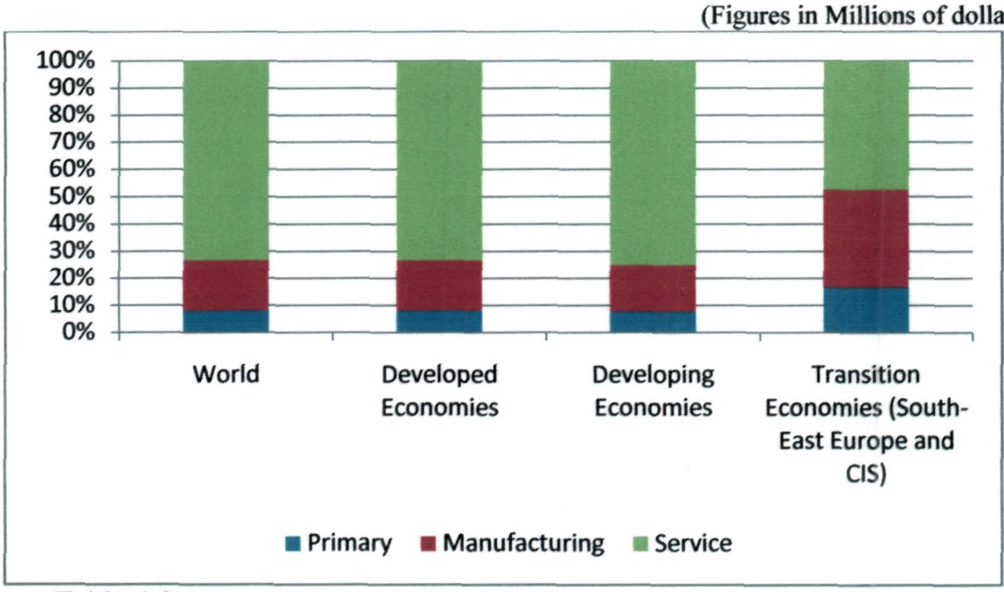
(Figures in Millions of dollars)

2009: First Half				
Group of Economies	**All Industries**	**Primary**	**Manufacturing**	**Service**
World	123155	10004	22698	90453
Developed Economies	102313	8294	18967	75051
Developing Economies	19837	1541	3371	14925
Transition Economies (South-East Europe and CIS)	1005	168	360	477

Source: Collected and Compiled from World Investment Report 2009, Transnational Corporations, Agricultural Production and Development, United Nations Conference on Trade and Development, United Nations Publication, Sales No. E.09.II.D.15, New York and Geneva, 2009

Figure 4.2.3: Cross-border M&A Sales, by Sector and by Group of Economies 2009(First Half)

(Figures in Millions of dollars)



Source: Table 4.2.4

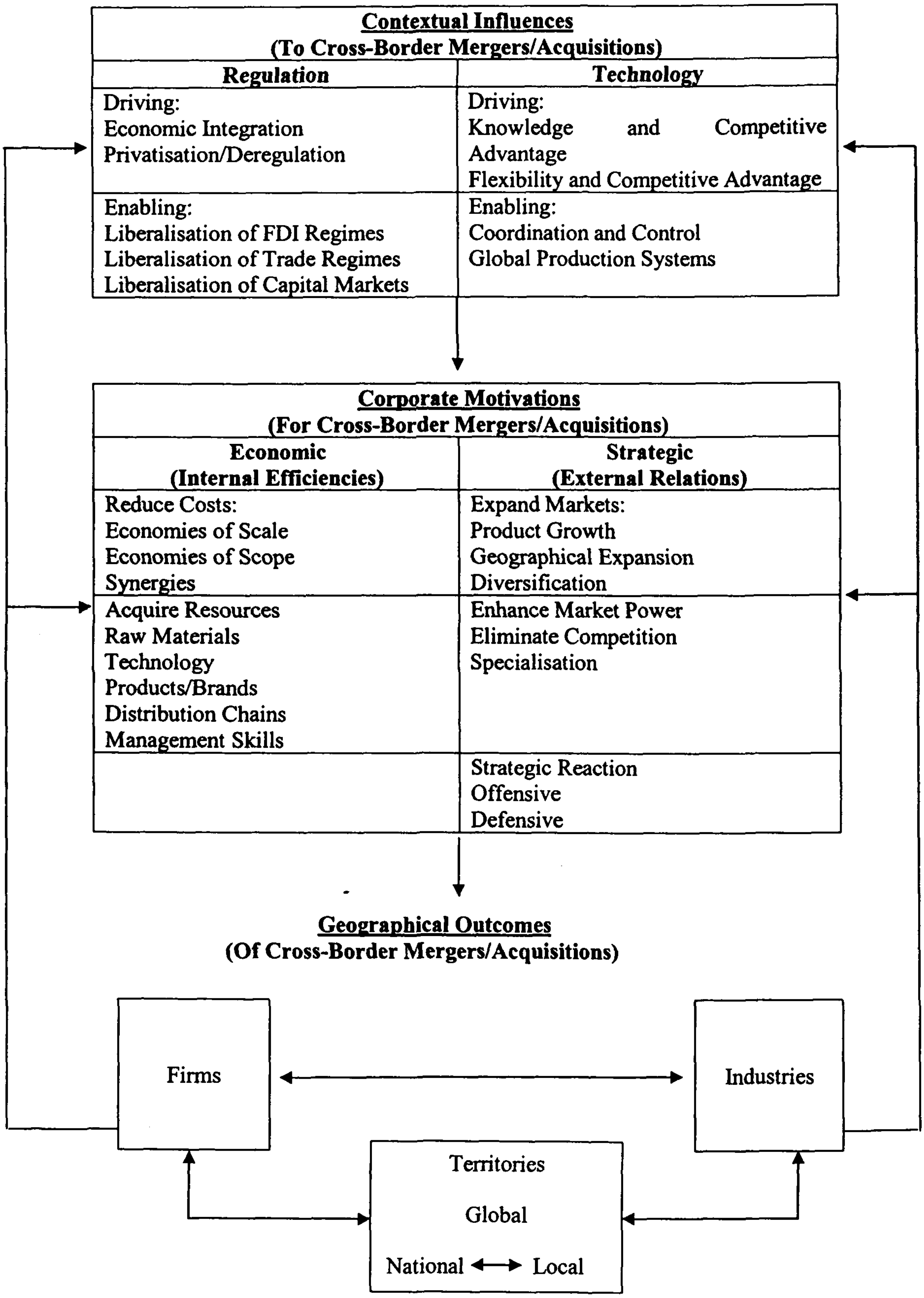
Various global blocks have been created with the purpose of promotion free trade and to do away with tariff's quotas and restrictions in certain regions. For example EU, NAFTA, ASEAN, SAARC, etc aim at promotion regional coordination and cooperation in a certain region. They have played a significant role in promoting cross border rate immensely.

Apart from financial, economic and business perspectives Mergers and Acquisitions (M&A's) also act as a tool in the hand of entrepreneurs to use it for establishing global presence and prestige and to dominate in the global scenario. In these cases, financial and economic analysis and also the valuation of expected synergies and benefits arising out of the merger or acquisition may take a back seat and the entire focus of the entrepreneur might be on fulfilling his global aspirations.

Creating and increasing shareholders value is a major motivation for entering into a merger or acquisition. The announcement of a merger or acquisition may greatly help in boosting the stock quotes and if it does not go well with the market sentiments it might lead to a downward movement in stock. Acquiring firms with low-priced assets, competitive edge, superior technology, greater market presence or competent management may go well with the psyche of the shareholders and lead to a corresponding boost in the value of shares. When deciding whether to enter into a merger or acquisition, one of the most common parameter on the basis of which various valuations are made is the quantum of expected synergies. The acquiring firm makes a detailed analysis about the various gains and benefits it is expected to make against the cost that it is required to pay for the proposed deal.

For the increased spate in the ongoing merger and acquisition activity a large number of factors are playing a vital role. Figure 4.3.1 discusses these in detail. Earlier the economic regulations were such that there were procedural and legal bottlenecks in finalizing a merger or acquisition deal. However, there have been vast changes incorporated in the economic framework of countries that has made the procedure of entering into an alliance much easier than ever before. In terms of regulations, the global economy is gradually becoming integrated and large scale privatization and deregulations measures are being undertaken by economies all across the globe. It has been further facilitated with the ease of restrictions earlier imposed on FDI, free trade and capital markets. It is imperative for the developing countries to enhance their technological competence in order to survive. It can be done through transfer of technology via mergers and acquisitions which would also provide them the necessary competitive edge to survive. This has been made possible with the increased coordination and control of the global production systems.

Figure 4.3.1: Cross Border Mergers and Acquisitions (M&A's): A Conceptual Framework



Source: Chapman, Keith (2003) "Cross Border Mergers/Acquisitions: A Review and Research Agenda", Journal of Economic Geography 3, (2003), pp. 309-334

4.4 International Scenario of Mergers and Acquisitions (M&A's)

In the International scenario mergers and acquisitions seem to be catching the fancy of entrepreneurs worldwide. However, the phenomenon is not new. The movement can be traced to the Great Merger Movement which was predominantly a US phenomenon which took place from 1895 to 1905[5]. It marked consolidation by small firms, which included merging of firms engaged in similar business in order to become powerful and dominate in their respective market or sector. The vehicles used were so-called trusts.

It was then in the 1980's that the world witnessed a dramatic increase in the number of takeovers and acquisitions. In the United States, the 1980's may legitimately be characterized as a decade of "merger mania".[6] . While the exact number and value of mergers and acquisitions that occurred during that time period cannot be accurately be known, it is estimated that 57000 mergers took place between 1980 and 1990, an increase of 119percent from the previous decade[7] (Buono and Bowditch, 1989). It was in this period that takeover and mergers attracted considerable media attention and aroused public interest. It was followed by a significant rise in globalization which made the world economies integrated and the era of cross border mergers set in. The mindset of entrepreneurs and industrialists broadened and attempts were being made to explore the world market. Mergers and acquisitions proved to be a potent tool for easy and quick entry in new markets

Table 4.4.1 highlights the major mergers engineered in the 1990's. WorldCom and MCI Communications merged to create MCI WorldCom in 1997 which made it the largest merger in the history of USA at that time. The Exxon Mobil merger was a strategic and complementary one creating the third largest company in the world in 1998. Bell Atlantic and GTE merger was done for the purpose of further expansion and facing competition. Vodaphone purchased AirTouch Communications Inc. and altered its name to Vodaphone Airtouch Plc. Pfizer Warner-Lambert merger created world's largest pharmaceutical company. US West, Inc. was acquired by Quest Communications in a deal which many analysts termed as hostile. Citicorp and Travelers group merger aimed to serve the financial needs of customers by offering personalized services through multiple distribution channels. The SBC and Ameritech merger was expected to benefit customers, employees and investors through expanded scale, scope, resources, innovation, creation of value etc. Vodafone purchased Airtouch which gave it 35percent share of Mannesmann, owner of largest German mobile network.

Table 4.4.1: Major M & A's in the 1990s

Rank	Year	Purchaser	Purchased	Transaction value (in million US$)
1	1997	Worldcom	MCI Communications	42000
2	1998	Exxon	Mobil	77200
3	1998	Bell Atlantic(5)	GTE	53360
4	1998	BP(6)	Amoco	53000
5	1999	Vodafone Airtouch PLC	Mannesmann	183000
6	1999	Pfizer	Warner-Lambert	90000
7	1999	US West	Qwest Communications	48000
8	1999	Citicorp	Travelers Group	73000
9	1999	SBC Communications	Ameritech Corporation	63000
10	1999	Vodafone Group	Airtouch Communications	60000

Source: "Mergers and Acquisitions" Wikipedia, the Free Encyclopedia, Retrieved from http://en.wikipedia.org/wiki/Mergers_and_acquisitions (27 May 2008)

4.5 Industry-wise Analysis of Mergers and Acquisitions (M&A's) in the Global Economy

i. Metal Industry

The mining reserves are limited and require constant replenishment. The sector thrives on two kinds of strategies, i.e. exploration and mergers or acquisitions. While the former is an expensive method, the latter is gaining popularity in the present scenario of increased competition and global cost cutting where exploration cost is difficult to absorb. In 1998 the industry spent more than $25 billion on M&A's, which was twice the amount was spent two years earlier.

Table 4.5.1 shows the significant mergers in the mining sector where despite apprehensions about mode of financing due to volatility in the debt market, significant mergers and acquisitions took place in the mining sector. Sims Group merged its operations with Hugo Neu Company in 2005 to create the world's largest metal recycler in the world based on market capitalization. Falconbridge Ltd. was acquired by Xstrata which was Swiss based in 2006. CVRD purchased the words second largest producer of nickel, Inco in 2006. Sims group went on to merge with Metal Management to create North America's largest metal recycler. Steel Dynamics Inc. (SDI), Fort Wayne, Ind. and Omnisource Corp merged to create second largest ferrous scrap recycler in the United States in 2007. However, the most significant merger in the industry was the one between the world first and second largest company, Rio Tinto and Alcan. It created an aluminium agent and was the largest ever deal engineered in the industry. With China and other developing economies continuing to grow and demand in Europe and North America remaining stable, consolidation in the industry is expected to continue. The acquisition of Omni Source gave Steel Dynamics a platform to expand in North America. The world's largest steel maker Arcelor-Mittal acquired the Canadian Bakermet which was a market leader in scrap metal

Table 4.5.1: M&A in Scrap Metal

Company 1	Company 2	Year	Value of deal
Hugo Neu Company	Sims Group Ltd	2005	US$ 500 million
Xstrata	Falconbridge	2006	£ 9.1 billion
CVRD	Inco	2006	£ 9.4 billion
Metal Management Inc	Sims Group	2007	US$ 1.6 billion
Steel Dynamics Inc. (SDI), Fort Wayne, Ind.	Omnisource Corp	2007	US$ 1 billion
Rio Tinto	Alcan	2007	US$ 38 billion
Steel Dynamics	Omni Source Corp	2007	US$1 billion
Sims Group Limited	_Weinert Recycling	2008	Not Disclosed
ArcelorMittal	Canadian Metals Recycler Bakermet	2008	

Source: Compiled from Various Business Dailies, Reports, Annual Reports , Websites and Articles[8][9][10]

ii. Pharmaceutical Industry:

Keeping in line with the global trend of growth and expansion, M&A is proving to be one of the most desired tools in this direction. Health has no boundaries, which is the reason behind the pharmaceutical sector having no global or political boundaries. However, it entails huge amount of finance in research and development for producing new drugs and bringing improvements in the old ones. M&A's is a viable tool in this direction where it is possible to takeover companies that already made progress rather than establishing a new unit.

With the expiry of patent, the profits of the original drug producer company are wiped away by generic competitors. These do not have any expenses relating to drug discovery and development but just convince the customers that, the drug produced by them is the same as produced by other companies and is also much cheaper. Entering into a merger with these firms eliminates competition and economies accrue due to economies of scale. The globalization phenomenon and the tremendous development in the financial institutions and markets have made capital easily available to entrepreneurs. This has made financing mergers and acquisitions easy.

Table 4.5.2 enlists the important pharmaceutical mergers of 1990's. Bristol Myers merged with Squibb Corp in 1989 to create the world's second largest pharmaceutical company. American home Products took over American Cynamide in 1994 to create one of world's largest company with a broad range of products in its basket. Ciba Geigy and Sandoz merged in 1996 to form Novartis Ag which was one of world's largest company. Astra and Zeneca merged in 1998 in one of the largest European merger ever and form the fourth largest drug company in the world which would be named AstraZeneca.

Table 4.5.2: Top Pharmaceutical Companies Mergers in the World in the 1990's

Merging Company	Merged Company	Year of merger	Value of merged Company
Dow Chemicals	Marion Labs	1986	$6.21 billion
Bristol Myers	Squibb Corp	1989	$ 12.09 billion
Beecham Group	Smith, Kline & French	1989	$7.9 billion
America Home Products	American Cynamide	1994	$9.7 billion
Hoffman La Roche	Syntex Lab	1994	$5.3 billion
Eli Lyly	PCS Health System	1994	$4 billion
Sandoz	Gerber	1994	$3.7 billion
Smith Kline Beecham	Sterling	1994	$2.9 billion
Glaxo	Burroughs Wellcome	1995	$14.2 billion
Hoechst	MMD Roussel	1995	$7.2 billion
Pharmacia	Upjohn	1995	$7 billion
Rhone-Poulenc Rorers	Fison	1995	$2.7 billion
BASF	Boots	1995	$1.3 billion
Ciba Geigy	Sandoz	1996	$30.1 billion
Hoffman La Roche	Coamge Ltd	1997	$11 billion
Hoechst A.G	Rhone Poulenc	1998	
Astra	Zeneca	1998	$67 billion

Source: Dubey, D.P "Globalisation and its Impact on the Indian Pharmaceutical Industry" Retrieved from
http://www.revolutionarydemocracy.org/rdv5n1/pharmacy.htm (29 August 2008)

Table 4.5.3 highlights other significant mergers in pharmaceutical sector. In 2000 Pfizer took over Warner-Lambert in a hostile merger which was one of the biggest deals in this sector then. Glaxo Wellcome and Smithkline Beecham merged in 2000 and it was expected to control 70percent of world's pharmaceutical market making it equal with Pfizer as world's largest company. Johnson and Johnson in its biggest move, merged with Alza to bring one and half percentage points to the growth rate of Johnson and Johnson (J&J) revenue during next five years. In 2004 Sanofi-Synthelabos took over Aventis to benefit from the complementary nature of the combined group's existing product portfolio. UCB Pharma merged with Celltech Group Plc in 2004 to create Europe's largest biotechnology company and fifth largest worldwide. The merger between Alliance Unichem and Boots Group was viewed as a merger of equals to create a global healthcare company by creating a platform for both companies to grow. Boston Scientifics' Corp purchase of Guidant Corp (Stentmaker) in 2006 was regarded as a disastrous purchase which led to 40percent drop in Boston Scientifics share price. The takeover of Genentech by Roche was slated to be the largest in the Swiss corporate history. The acquisition by Pfizer's of its competitor Wyeth in 2009 combined the two strong companies who expected to benefit from each other's expertise but resulted in job losses too. The deal with Schering-Plough was expected to boost the presence of Merck in biopharmaceuticals.

Table 4.5.3: M&A in Pharmaceutical Sector

Company	Merger	Year	Value of deal
Pfizer	Warner Lambart	2000	$90 billion
Glaxo Wellcome	Smithkline Beecham	2000	$182 billion
Johnson & Johnson (J & J)	Alza	2001	$10.5 billion
Bristol-Myers-Squibb	Du Pont Pharmaceuticals	2001	$7.8 billion
Pfizer Inc	Pharmacia Corp	2003	$60 billion
Pfizer	Esperion Therapautics	2003	$1.3 billion
British Biotech Plc	Vernalis Group Plc	2003	£ 48 million
Sanofi-Synthelabos	Aventis	2004	$63.2 billion
Bayer Plc	Roche Consumer Health	2004	EUR 2.38 billion
Celltech Group Plc	UCB Pharma	2004	$2.7 billion
Atrix Laboratories Inc.	QLT Inc	2004	€750 million
Bioglan Pharmaceuticals	Bradley Pharmaceuticals Inc	2004	$183 million
MJ Research Inc	Bio-Rad Laboratories Inc	2004	$ 47 million
Respironics Inc	Profile Therapeutics Plc	2004	$45 million
pSivida Ltd	QinetiQ Ltd	2004	$41 million
OrthoLogic Corp	Chrysalis BioTechnology Inc	2004	$34 million

Actavis	Alpharma	2005	$810 million
Amgen Inc (AMGN)	Abgenix	2005	$2.2 billion
Alliance Unichem	Boots Group	2006	$12 billion
Boston Scientific Corp	Guidant Corp (stentmaker)	2006	$27 billion
Abbott Laboratories	Kos Pharmaceuticals Inc	2006	$3.7 billion
TEVA Pharmaceutical Industries	IVAX Corporation	2006	$7.4 billion
Merck and Co. (MRK)	Sirna Therapautics	2006	$1.1 billion
Johnson and Johnson (J & J)	Conor Medsystems (small stent developer)	2007	$1.4 billion
Watson	Andrx	2008	$1.9 billion
Merck and Co.	Schering-Plough	2009	$41 billion
Roche	Genentech	2009	$ 46 billion
Pfizer	Wyeth	2009	$68 million

Source: Compiled from Various Business Dailies, Reports, Annual Reports, Websites and Articles[11][12][13]

iii. Aviation Industry:

In the past decade the aviation sector has been hit hard by the global recession and the September 11 attack on the World Trade Center twin towers. It shook the confidence of the passengers which had an adverse impact on the profitability of various airlines. This sector is in dire need of restructuring in order to be financially viable and break even. There is a need of consolidation among the large number of airlines existing in Europe and USA in order reduce cost and ensure efficient operations and profitability. However it should also be kept in mind that majority of mergers have proved to be unsuccessful. Hence, careful and systematic assessment of resulting synergies should be made before actually implementing the proposed mergers

The various mergers that have taken place in the international scenario have been classified in Table 4.5.4. Air Canada finally managed to acquire Canadian Airlines which was Canada's second largest carrier which made it the 12th largest airline. The horizontal merger of Air France and KLM group which took place between September 2003 and May 2004 led to the creation of Europe's biggest airline where KLM was the target firm and Air France the bidder firm. It was the first major cross border merger in airline sector since decades which not only created synergies but was also beneficial to customers of both airlines. We generally see that an announcement of a merger leads to significant changes in the share prices of both the target and bidder firms. The movement of the share prices of KLM and Air France can be depicted in the following diagram. Based on the closing share price of Air

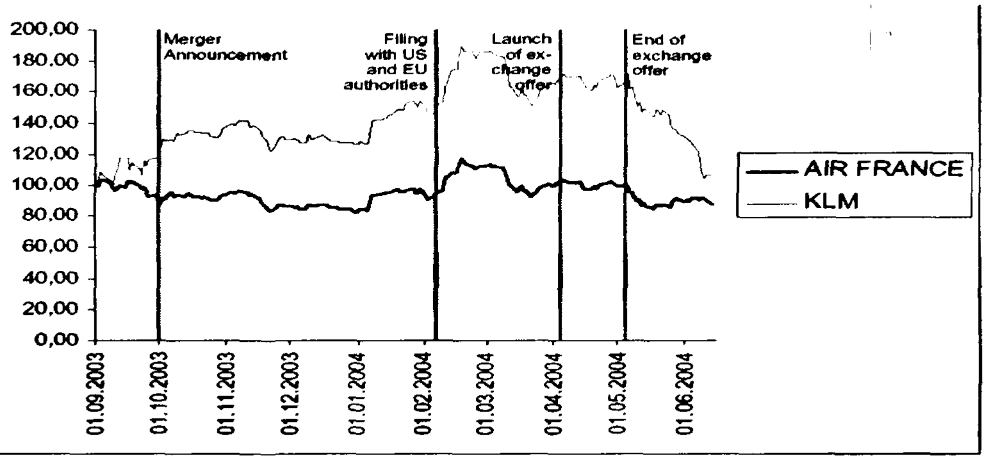
France on September 29, 2003 the public exchange offer valued the common share capital of KLM at approximately EUR 784m or each KLM share at EUR 16.74, which represented a premium of 40percent over KLM's closing share price of EUR 11.96 at the Amsterdam Stock Exchange on September 29, 2003.The US airways and America West merger was finalized in 2005 and the value of the deal approximated at US $1.5 billion. The world's largest airline Delta was created after the merger between Delta Airlines and Northwest Airlines.

Table 4.5.4: M&A in Aviation Industry

Merging Company	Merged Company	Year of merger	Value of merged Company
Air Canada	Canadian Airlines	2000	$92 million
Air France	KLM	2004	
America West Airlines	US Airways	2005	$1.5 billion
Delta	North West Airlines	2008	US$3.1 billion

Source: Compiled from Various Business Dailies, Reports, Annual Reports , Websites and Articles[14]

Figure 4.5.1: History of Air France and KLM



Source: Capital Markets Assessment of European Airline Mergers and Acquisitions- The case of Air France and KLM (Dipl.- Kfm. Mark Friesen, March 2005)

iv. Telecommunication Industry:

Telecommunication Sector is viewed as one of the most promising and rapidly developing industries in the world. There has been stiff competition in this sector and M&A is proving to be a potent tool for entering into strategic alliances. The trend of the number of mergers and acquisitions is constantly on the rise and is expected to escalate further at a rapid pace. It is further boosted by the increased interest of foreign institutional investors and private players. Recent mergers and acquisitions in this sector are shown in Table 4.5.5. These mergers provide a series of advantages like better infrastructure, easier licensing options, wider coverage of network and customer base etc.

Table 4.5.5 displays a list of significant mergers in telecom sector where GTE and Bell Atlantic merged to create Verizon in one of the largest merger in order to sustain the ongoing competition day by day which was getting stiffer. AT and T merged with Cingular in 2004 to create nation's biggest wireless carrier in terms of subscribers and serve top 100 US metropolitan areas. Nokia and Siemens merged their telecommunication network which would make it among the top three companies in infrastructure indicating growing competitive pressure in the telecom supplier market. ATandT and Bell South merged to create world's single largest telecommunication company. Verizon Wireless acquisition of Alltel made it the largest wireless carrier in USA. The merger between Orange and T-Mobile was expected to create synergies and also reduce cost by using each other's infrastructure and market base.

Table 4.5.5: M&A in the Telecommunication Industry (Figures in US $)

Company 1	**Company 2**	**Year of merger**	**Value of Deal**
Bell Atlantic	NYNEX	1996	27 billion
SBC	Pacific Telesis	1997	16.7 billion
GTE	Bell Atlantic	2000	116 billion
Deutsche Telekom AG	Voice Stream Wireless Corp.	2000	50.7 billion
AT and T	Cingular	2004	41 billion
SBC	ATandT	2005	$16 billion
Nokia	Siemens	2006	31.6 billion
Lucent	Alcatel	2006	13.4 billion
AT and T	Bell South	2007	$86 billion
Verizon	Alltel Wireless	2008	$28 billion
Orange	T-Mobile	2009	400-600 million pounds

Source: Compiled from Various Business Dailies, Reports, Annual Reports, Websites and Articles[15]

v. Financial and Banking Industry

The drive for mergers and acquisitions in the financial sector is mainly a part of expansion efforts of financial institutions. The growth in revenues has been stagnant and cost reduction through internal restructuring has already been done to the maximum possible extent. The stock price movement serves as financial motivator to pursue merger and acquisition deals.

Among the significant mergers as shown in Table 4.5.6, Nation's Bank took over Bank America in 1998 to compete more efficiently in an international industry that increasingly emphasizes on size to create the largest US Bank ranked by assets in the second largest takeover in corporate history. Banc One Corp acquired first Chicago NBD Corp to create the fifth largest US Bank and the largest in the Midwest. Merger between Bank of America and Fleet Boston Bank in 2003 ushered in a new banking leader by creating the first banking institution with a truly national scope and fourth most profitable company in the world. JP Morgan Chase and Bank One merger combined two of the biggest banks in USA. It was the third largest merger in US financial services and made it a rival to country's largest bank Citigroup. Wachovia, nation's fourth largest bank acquired Golden West Financial in 2007 to make a strong footing in California to further its aim of becoming a national retail bank despite the apprehensions its shareholder's had about the deal. Capital One acquired Northfork Ban Corp to create one of the ten largest banks in United States based on deposits and managed loans and third largest retail depository institution in the New York region. Regions Financial acquired South Ban Corp in a merger to create nearly US$ 140 billion in assets . Lincoln National acquired Jefferson-Pilot in a deal which executives believed would create largest publicly traded Life Insurance Companies in the nation. Aviva, world's fifth largest insurance and investment group acquired Amer US to establish a leading position in a high growth segment of the world's largest saving market. The merger between Bank of America and Merill Lynch made it the largest securities firm in the world in 2008 while the one between Wells Fargo and Wachovia created the fourth largest bank in USA. The MDM and URSA bank created one of the largest financial institutions in India.

Table 4.5.6: M&A in the Financial and Banking Industry (Figures in US $)

Company 1	Company 2	Year of merger	Value of deal
Bank America	Security Pacific	1992	4.1 billion
First Chicago Corp	NBD Bancorp	1995	5.3 billion
Sun Trust Bank	Crestar Financial	1998	9.8 billion
Bank of America	Fleet Boston Bank	2003	49.3 billion
JP Morgan Chase	Bank One	2004	58.7 billion
Banco Santander	Abbey National	2004	15.6 billion
Wachovia	South Trust	2004	14.3 billion
Royal Bank of Scotland	Charter One	2004	10.6 billion
Sun Trust	National Commerce	2004	7.0 billion
North Fork	Greenpoint	2004	6.4 billion
Regions Financial Union	Planters	2004	6.0 billion
National City	Provident Financial	2004	2.1 billion
Sovereign	Seacoast Financial	2004	1.1 billion
Bank of America	MBNA Corporation	2005	35 billion
Wachovia	Westcorp Inc.	2006	3.91 billion
Wachovia	Golden West Financial	2006	25 billion
Citizens Banking Corporation	Republic Bancorp	2007	1.048 billion
Banco Bilbao Vizcaya Argentaria	Compass Bacshares	2007	9.8 billion
Bank of America	LaSalle Bank	2007	21 billion
State Street Corporation	Investors financial Services Corporation	2007	4.2 billion
Bank of New York Company, Inc.	Mellon Financial Corporation	2007	18.3 billion
Wachovia	World Savings Bank	2007	25 billion
Wachovia	A.G Edwards	2007	6.8 billion
Capital One	North Fork Bancorp.	2007	13.6 billion
Regions Financial Corporation	AmSouth Bancorporation	2007	10.5 billion
Lincoln National	Jefferson Pilot	2007	8.2 billion
Aviva	Amer US Group	2007	2.8 billion
TD Banknorth	Commerce Bancorp	2008	$8.5billion
Bank of America	Merill Lynch	2008	$50 billion
Wells Fargo	Wachovia	2008	$15.1 billion
PNC Financial Services	National City Corp	2008	$5.08 billion
MDM Bank	URSA Bank	2009	NA

Source: Compiled from Various Business Dailies, Reports, Annual Reports , Websites and Articles[16]

vi. Cosmetic Industry

There has been a noticeable increase in the investments in the cosmetic sector especially in 2007 with natural and organic cosmetics emerging as a hot destination for investment. Though scattered, the mergers in cosmetic sector have shown a steep upward movement. M&A is a popular tool in this sector as it offers viable opportunities for growth due to the increase in sales they enjoy from positive response of customers to launch of new products, entering a new market, wider distribution network, integrating R&D, production and capital resources.

Table 4.5.7 gives a purview of the various mergers taking place in the cosmetic arena. Among the noticeable ones is the acquisition of Body Shop by L'oreal which gave the former a worldwide perspective, access to advanced research and development and also proved as a complement to the latter's diversified portfolio. Clorox acquired Burtbees in 2007 mainly to foster growth and also take advantage of Burtbess extensive capabilities and credibility. Colgate-Palmolive's acquisition of Tom Maine was viewed as an attempt by the former to make a foray in naturals segment and personal care in which Tom Maine was a leader. Tom Maine also got access to the diversified customer base of Colgate. The second biggest cosmetic surgery provider of UK, The Hospital Group acquired control in the Spain based Mills and Mills medical tourism company.

Table 4.5.7: M&A in the Cosmetics Industry

Acquirer Company	Acquired Company	Year	Value of deal
L'oreal	Body Shop	2006	US$ 1.14 billion
Clorox	Burt bees	2007	US$ 925 million
Colgate-Palmolive	Tom's of Maine		US$ 100 million
L'oreal	Maly's West	2007	
L'oreal	Canan	2007	
Parfum d' Image	Latitudes		
Beierdorf	C-Bons hair	2007	Euro 269.45 million
The Hospital Group	Mills and Mills	2009	

Source: Compiled from Various Business Dailies, Reports, Annual Reports , Websites and Articles[17][18][19]

vii. Technology Industry

. The global credit crunch and unfavorable economic environment had little effect on this sector. It was driven by increased consumer demand and integrated solutions. In future also the M&A activity is expected to be critical tool for expansion and survival. Table 4.5.8 highlights major deals in this sector. The merger between AT & T Broadband and Comcast was expected to create world's pre-eminent broadband services and one of the leading and most powerful communications media and entertainment companies in the world. At and T further acquired Bell South in 2007 to benefit from the union of wired and wireless networks through combination of two leading providers. Alcatel's acquisition of Lucent Technologies was mainly to face competition and complement resources especially in the research and development area. The acquisition of Scientific Atlanta by Cisco created an entity with a world class end-to-end triple play solution for carrier networks and digital home. Oracle's acquisition of Siebel systems was viewed as a high price move but it also provided it with rival customer's base in its hold. The acquisition by Seagate Technology of Maxtor enabled the resultant company to compete more effectively in a highly competitive data storage industry to meet challenges and opportunities and also generate significant synergies. Anteon's acquisition by General Dynamics is regarded as one of largest defensive mergers.

There has been vibrant activity in the technology in the last few years where a large volume of M&A deals were affected. The merger of SPSS was expected to strengthen the information agenda of IBM. Agilent Technologies acquired Varian which was expected to provide new product offerings and cost synergies.

Table 4.5.8: M&A in Technology Industry

Acquirer Company	Acquired Company	Year of deal	Value of deal
AT and T Broadband	Comcast	2002	US$ 72 billion
Adobe Systems	Macromedia	2005	US$ 3.4 billion
Intuit Corp	Digital Insight Inc	2006	US$ 1.35 billion
Intuit Inc	Homestead Technologies	2007	US $ 170 million
Cisco	Securrent	2007	US$ 100 million
IBM	Cognos	2007	US$ 5 billion
Acer	Gateway	2007	US$ 710 million
AT and T	Bell South	2007	US$ 85.6billion
Alcatel	Lucent Technology	2007	US$ 11.7billion
Cisco Systems	Scientific Atlanta	2007	US$ 5.2billion
Oracle	Siebel Systems	2007	US$ 3.7billion
Seagate Technology	Maxtor	2007	US$ 2.4 billion
General Dynamics	Anteon	2007	US$ 2.1 billion
Sun	MySql	2008	US$ 1 billion
Oracle	BEA Systems Inc.	2008	US$ 7.85 billion
Hughes Communication Inc.	Helius Inc.	2008	US4 30.5 million
20-20 Technologies	Icovia	2008	US$ 1.6 million
IBM	SPSS	2009	$1.2 billion
Agilent Technology	Varian	2009	$1.5 billion

Source: Compiled from Various Business Dailies, Reports, Annual Reports , Websites and Articles[20][21][22][23][24]

viii. Health Industry

The Health Sector witnessed a huge number of mergers and acquisitions in 2007 and the trend continued in 2008. The sector has seen a remarkable boom in the past in the background of growing interest and consciousness of consumers towards health issues and also due to the increase in the number of diseases. Table 4.5.9 highlights the mergers undertaken in Health sector. Dada Behring Holdings, world's largest clinical diagnostics company and Siemens, the first and currently only full service diagnostics company merged to become the largest provider of clinical diagnostics products and services all over the world. Plethico Pharmaceuticals acquired Natrol Inc. to position itself as a globalplayer in herbal healthcare products. Royal Philips and VISICU Inc merged together to bring together Greater Baltimore's fastest growing public companies with one of world's biggest makers of patient monitoring technology. The merger between Astellas Pharma US Inc. and Agensys was viewed as a rare combination which would benefit investors and employees of both the merged entities. Boston Scientific acquired Guidant in order to create a strategic partnership for creating a broadly diversified medical technology company. Novartis acquired Chiron in order to expand its vaccine business. Fresenius Medical Care, world's largest provider of dialysis products and services acquired Renal Care Group, a fast growing and highly profitable dialysis provider in order to complement its business and create a common vision of high quality of care.

Table 4.5.9: M&A in Health Industry

Acquiring Company	Acquired Company	Year of Deal	Value of Deal
Siemens	Dade Behring Holdings	2007	US $ 7 billion
Inovo Inc	Chad Therapautics Inc	2007	US$ 5.3 million
Plethico Pharmaceuticals	Natrol Inc	2007	US$ 80.7 million
Radnet Inc.	Papastavros Associates Medical Imaging LLC	2007	US$ 21.6million
Amerigroup Community Care	Memphis Health Plan	2007	US$ 12 million
Royal Philips	VISICU Inc.	2007	US$ 430 million
Astellas Pharma US Inc.	Agensys Inc.	2007	US$ 537 million
Boston Scientific	Guidant	2007	US$ 25.1billion
Novartis	Chiron	2007	US$ 5.2billion
Fresenius Medical Care	Renal Care Group	2007	US$ 3.5billion
Inverness Medical Innovations (IMA)	Matria Healthcare (MATR)	2008	
SRL Ranbaxy	Fortis Health	2008	
Merge Healthcare	AMIAS	2010	$248 million

Source: Compiled from Various Business Dailies, Reports, Annual Reports , Websites and Articles[25][26][27][28]

ix. Business Services Industry

In recent years M&A's have been taking place globally and have become increasingly diverse in terms of nature of services involved. Global restructuring of the economy and rising competitive pressure are among the major reasons for the merger mania in the business services sector which is experiencing vast technological changes. Also merged entities attempt to maximize from the creation of synergies and reduction in costs.

Table 4.5.10 gives an insight about relevant mergers that have taken place in the Business Services Sector. The merger between Macrovision Corp and All Media Guide LLC was expected to create synergies and benefit consumers by redefining consumer entertainment and also provide additional stockholder value to investors. Hub International acquired FLF Inc with the main object of expanding its operation in Northern California and provide a better pool of services and expertise. Quigo was the fourth acquisition for AOL LLC in 2007, in order to give its advertisers more control over where their ads appear. Impedal Capital LLC acquired USBX Inc as a part of its efforts to expand and also add strong resources to its existing base of M&A expertise and deep sector knowledge. The acquisition of Aviva Global services which was based in UK gave WNS a huge presence in India and Sri Lanka. The acquisition of Citigroup Financial Services by TCS was the largest purchase of a foreign captive BPO in India. Wipro maintained its acquisition spree with the purchase of Citi Technology Services Ltd (Citos)

Table 4.5.10: M&A in Business Services Industry

Acquiring Company	Acquired Company	Year of Deal	Value of Deal
Macrovision Corp	All Media Guide LLC	2007	US$ 74.8 million
Hub International of California Inc.	FLF Inc.	2007	ND
AOL LLC	Quigo Technologies Inc	2007	ND
Manatt Phelps and Philips LLP	Steefel, Levitt and Weiss	2007	ND
Impedal Capital LLC	USBX Inc.	2007	ND
WNS	Aviva Global Services	2008	$32-34 million
Babel Media	Quattro	2008	$100-125 million
TCS	Citigroup Global Services	2008	$505 million
Wipro	Citi Technology Services Ltd (Citos	2008	$127 million

Source: Compiled from Various Business Dailies, Reports, Annual Reports , Websites and Articles [29] [30]

x. Consumer Industry

With the market in the consumer sector getting competitive and margins getting tighter for manufacturers, M&A is appearing as a viable tool to survive and sustain. The expenditure on marketing products has also seen a sharp decline and pooling of resources and capital through restructuring appears as a relevant option.

Table 4.5.11 gives a bird eye view about recent mergers and acquisitions in Consumer Sector. Few important ones have been explained below. Thermo Electron acquired Fisher Scientific in order to create a leading provider of laboratory products and scientific equipment and offer strong future prospects which would have been difficult for either company to create individually. R.H Donnelley acquisition of Dex Media created the third largest Print and Internet Directory Publisher in the United States.MC Clatchy acquired Knight Ridder in a bid to become the second largest publisher in the United States. Hughes Supply purchase by Home Depot was its largest purchase ever and expected to aid it in its expansion in e-commerce. Godrej acquired the South African Kinky Group which was one of the biggest in the business in South Africa. It gave the former an opportunity to enter a new market and diversify its portfolio. GfK Switzerland AG, FMCG Retail Measurement and Consumer Panel Business was acquired by the Nielsen Company for undisclosed terms which was expected to enable the merged unit to provide more integrated consumer services.

Table 4.5.11: M&A in Consumer Industry

Acquirer Company	Acquired Company	Year of Deal	Value of Deal
Thermo Electron	Fisher Scientific	2007	US$ 11.1billion
R.H Donnelley	Dex Media	2007	US$ 4.2billion
Aecom Technology Corp	Economics Research Associates	2007	ND
Mc Clatchy	Knight-Ridder	2007	US$ 3.2billion
Noble Private Equity Funds	Richardson Hotel	2007	ND
Isonics Corp	Universal Guardian Holdings	2007	US$ 10.3 million
Home Depot	Hughes Supply	2007	US$ 3.2billion
Brentwood Associates	Zoe's Kitchen USA LLC	2007	ND
General William Lyon	Lyon Homes	2007	US$ 0.5billion
Godrej Consumer	Kinky Hair Brand	2008	$33 million
The Nielsen Company	GfK Switzerland AG, FMCG Retail Measurement and Consumer Panel Business	2009	ND

Source: Compiled from Various Business Dailies, Reports, Annual Reports , Websites and Articles [31][32][33][34]

xi. Beverages Industry

This sector is viewed as highly fragmented yet financially stable. The trend of M&A in this sector has been to exploit opportunities on case by case business and not in an aggressive mode in the least. However consolidation may prove a key to leverage resources to its benefit. Major deals are shown in Table 4.5.12.

In order to boost its sales Coca-cola acquired Pan-American beverages which was much larger but debt ridden as a result of which the second largest bottling giant in the world was created. Cadbury Schweppes sold a large portion of its overseas business to Coca-cola which gave it a strong push in the beverages sector by giving it a huge cash reserve. Amoskeag Beverages Inc. of Hooksett and Capitol Distributors Inc. of Bow have merged into a new entity, Amoskeag Beverages LLC, which will be one of the largest beer distributors in the state in 2008. The acquisition of Scottish and New Castle was expected to make Carlsberg and Heineken the fastest growing brewers in the world.

Table 4.5.12: M&A in Beverages Industry

Acquiring Company	Acquired Company	Year of deal	Value of deal
Coca- cola	Panamerican beverages	2003	US$ 3.6 billion
Anheuser-Busch Co	Harbin Brewery Group	2004	US$ 139 million
Coca-cola	Cadbury Schweppes Plc		US$ 700million
Fiji Water LLC	Neptune Shipping Line	2007	ND
Amoskeag Beverages Inc.	Capitol Distributors Inc.	2008	ND
Vina Tarapaca	Vina San Pedro	2008	Stock Transaction
Carlsberg and Heineken	Scottish and Newcastle	2008	US$15.4 billion

Source: Compiled from Various Business Dailies, Reports, Annual Reports , Websites and Articles[35][36]

xii. Energy Industry

In case of energy sector it is observed that the post-transaction litigation increases the risk of the merger and hence, should be duly considered. Despite the negative political and legal factors in the international arena, M&A's have proved to be an important strategy for growth which is boosted by the investment made by private player contributing towards the increase in capital growth and competitiveness.

Table 4.5.13 gives a brief synoptic view of the mergers and acquisitions that took place in energy sector. Sony Corp of America, Royal Philips Electronics NV and other investors agreed to acquire Inter Trust Technologies. The purchase was affected through Fidelio Acquisition Company LLC which was new company especially formed for the purpose. In order to advance the development of its gas storage products Arcapita acquired Falcon Gas Storage Company in 2005. Conoco Philips acquired Burlington to create synergies in order to benefit shareholders. Anadarko Petroleum's acquisition of Kerr-Mc-Gee and Western Gas Resources in 2007 made it the second largest producer of natural gas and seventh largest producer of crude oil and natural gas liquids in the United States. The acquisition of Maverick Tube gave Tenaris full access to the energy sector in the US and Canada. As a result of the acquisition of Trans- Montaigne by Morgan Stanley the former ceased to be publicly traded and was no longer listed in NYSE. Consol Energy acquired CNX Gas in order to achieve greater flexibility in the access, allocation and utilization of capital in growing its diversified portfolio. The purchase of Brono Drilling gave Allis Chalmers Energy a chance to exploit domestic and international growth opportunities. The combination of Smith with WH energy was expected to provide Smith with a strategic edge in its operations. The deal between Suncor energy and Petro Canada made it the largest player in Canada.

Table 4.5.13: M&A in Energy Industry

Acquiring Company	Acquired Company	Year of Deal	Value of Deal
Trigen Energy	Elyo S.A	2000	US$ 290 million
General Electric Power Systems	Panametrics Inc.	2002	US$ 220 million
Fidelio Acquisition Company	Intertrust Technology Corporation	2002	US$ 453 billion
R/D Tech	Panametrics	2003	ND
GE	Agfa Gevaert	2003	US$ 480 million
GE Energy	BHA Group Holdings Inc.	2004	US$ 260 million
Arcapita	Falcon Gas Storage Company	2005	US$ 100 million
Allegro Biodiesel Corp	Community Corp	2007	US$ 1 million
Sherwood Investment Overseas	Rentech Inc.	2007	US$ 440 million
Weiss Family Trust	Superior Oil and Gas Company	2007	US$ 3 million
Consol Energy (CNX)	CNX Gas (CXG)	2008	US$ 932 million
Allis-Chalmers Energy (ALY)	Bronco Drilling (BRNC)	2008	US$ 437.8 million
Smith International	W-H Energy Services	2008	$3.2 billion
Suncor Energy	Petro-Canada	2009	Stock transaction

Source: Compiled from Various Business Dailies, Reports, Annual Reports , Websites and Articles[37][38][39]

xiii. Industrial Industry

A weak economy has led to financial crunch in this sector which has adversely affected the M&A's activity. The deals are highlighted in Table 4.5.14.

The merger between Alanco and Star Trak systems was mutually beneficial. The former managed to create more shareholder value and Star Trak Systems supplemented its position as well. Housatonic Partners and Tucker Partners took over Aircraft Fasteners Inc. which was a specialized distributor of aerospace, electronics and defense industry hardware with primary emphasis on electronic applications. The acquisition of Carter and Burgess gave Jacobs engineering Group Inc. important contacts within the US military and in public infrastructure projects. Performance Transportation Services Inc.. proposed to fill for bankruptcy as a part of a US$ 67 million deal to sell nearly all of its assets to Allied Systems Holdings. The merger between Tong Yang and Taiwan Kai Yih Industrial Co Ltd. in 2009 was expected to make a big increase in the revenues of the former. The merger of Byres Research and Exida produced the first safety and security certification and consulting company

Table 4.5.14: M&A in Industrial Industry

Acquiring Company	Acquired Company	Year of deal	Value of dal
Alanco	Star Trak Systems LLC	2006	US4 15 million
TSI Group Inc	ADB Industries	2007	ND
TSI Group Inc	Thompson Industries	2007	ND
TSI Group Inc	CGR Technologies	2007	ND
Housatonic Partners, Tucker Partners	Aircraft Fasteners Inc	2007	US$ 13.8 million
Jacobs Engineering Group Inc	Carter and Burgess Inc	2007	US$ 233.79 million
Calnetix Inc	Elliott Energy Systems Inc	2007	ND
Hinkley Lightning Inc	Fredrick Ramond Inc	2007	ND
Simco America	Leo Motors	2007	ND
Allied Systems Holding Inc	Performance Transportation Services Inc	2007	US$ 67 million
Freudenberg Nonwovens	Spasciani Air Filter SpA	2008	ND
Porvair	Tooltum Engineering	2008	£ 1 million
Tong Yang Tong Yang Industrial Co., Ltd	Taiwan Kai Yih Industrial Co., Ltd.	2009	Stock Deal
Byres Research Inc	Exida	2009	ND

Source: Compiled from Various Business Dailies, Reports, Annual Reports , Websites and Articles[40][41][42][43]

xiv. Media Industry

There has been a dramatic turnaround in the media sector where companies are making an effort to restructure and realign themselves with current trends keeping in view the changing consumer demographics. The huge profits at stake in the media sector are luring private investors towards it. The major deals can be seen in Table 4.5.15. In a move to add strategically to its slate of companies worldwide Deluxe Entertainment Services acquired Rainmaker Entertainment which was Canada's leading post-production facilities. In an attempt to further bolster its emerging music merchandising business Live Nations Inc. acquired Signatures Network Inc. Amazon acquired the audiobook company Audible which was expected to provide a wider choice to customers and scope for more innovation. The acquisition of Maven Networks, a video platform provider for US$ 160 million by Yahoo was expected to boost the latter's features related to video content. AOL acquired the social networking service of Bebo which is the second largest in UK for a whopping US$ 850 million. The acquisition of CNET Networks for US$1705.6 million made CBS Corporation one of the most popular internet companies in USA. Getty Images which was one of the largest providers of photographs was taken over by Helman and Friedman for US$ 2100 million. The merger of Pro-Bel and Snell and Wilcox was expected to provide better research and development infrastructure. The merger between Bahrain based Orbit and Dubai based Showtime expanded the customer base for both the companies.

Table 4.5.15: M&A in Media Industry

Acquiring Company	Acquired Company	Year of deal	Value of deal
Deluxe Entertainment Services	Rainmaker Entertainment	2007	US$ 31 million
Live Nation Inc	Signatures Network Inc.	2007	US$ 79million
Amazon.com	Audible Inc.	2008	US$ 300 million
Yahoo Inc.	Maven Networks Inc.	2008	US$160 million
AOL LLC	Bebo	2008	US$ 850 million
CBS Corporation	CNET Networks Inc.	2008	US$1705. 6million
Helman and Friedman	Getty Images	2008	US$ 2100 million
Pro-Bel	Snelland Wilcox	2009	ND
Orbit	Showtime	2009	ND

Source: Compiled from Various Business Dailies, Reports, Annual Reports , Websites and Articles[44][45][46][47]

4.6 *Impact of Recession on Global Mergers and Acquisitions (M&A's)*

The global economy was hit by a severe financial crisis in the year 2007 as a result of the banking and liquidity crisis in USA arising from the sub-prime mortgage crisis. It is interesting to see the impact of the economic fallout on merger activity. As a result of the financial crisis the valuations of the companies were at a low. However, it was not strong enough motivation for merger and acquisition deals. The value and volumes took a severe beating which is reflected in the analysis below.

The impact of global recession is reflected in Table 4.6.1 where a significant fall in Mergers and Acquisitions (M&A's) activity is witnessed. In the year 2008 the value of deals fell by -33.29percent, the volume fells by 18.50percent and the size of an average deal fells by 18.15percent. In the following year that is in 2009 the value of deals fell by -27.01, volume by -26.50 percent while the size of an average deal by 0.70percent. The investment climate was gloomy where major investors found the idea of a merger or acquisition risky. The impact of the financial crisis was strongly felt on the merger activities.

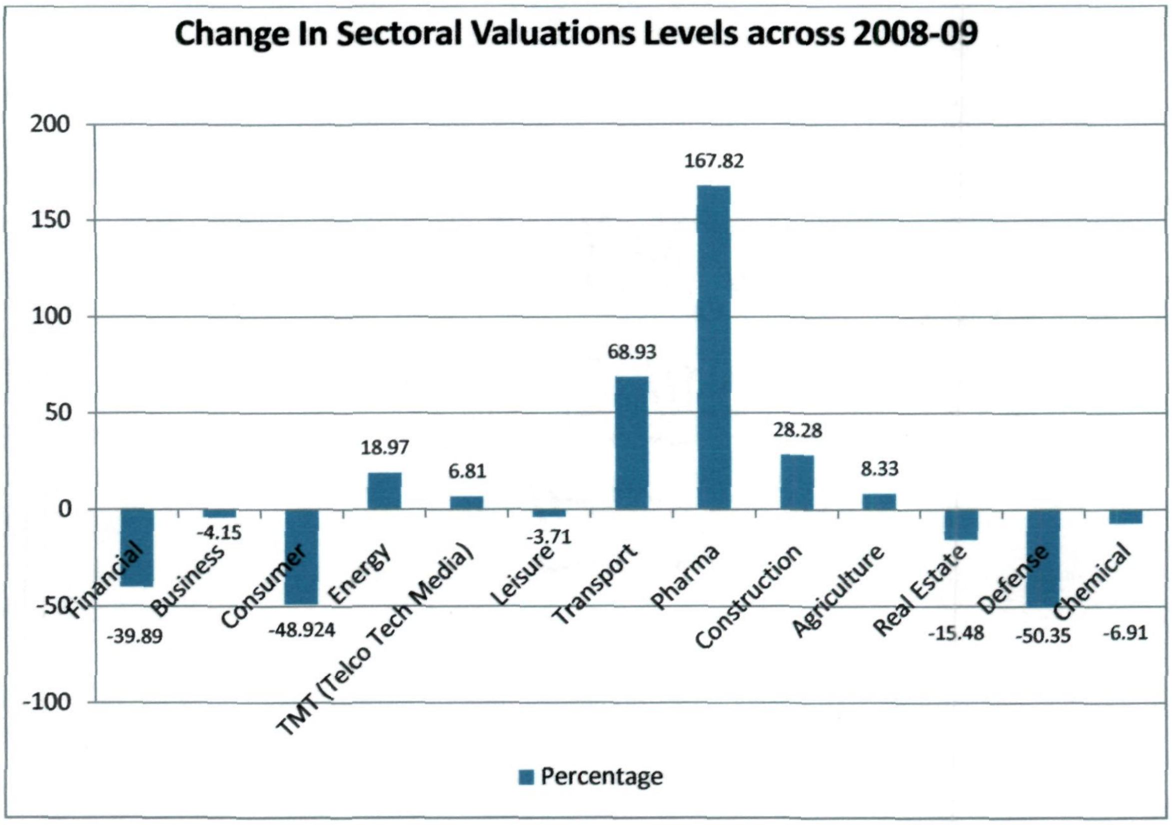
Table 4.6.1: Global Mergers and Acquisitions (M&A's) Activity

Year	Value (in $ billions)	% change in value over year	Volume	% change in value over year	Size of Average Deal	% change in value over year
2007	3635		15675		231;90	
2008	2425	-33.29	12775	-18.50	189.82	-18.15
2009	1770	-27.01	9390	-26.50	188.50	-0.70

Source: Sharma, Nimesh "Mergers and Acquisitions in times of Financial Crisis" Retrieved from http://www.dare.co.in/strategy/business-essentials/mergers-and-acquisitions-in-times-of-financial-crisis.htm (1 March 2010)

Figure 4.6.1 highlights the change in the valuation across various sectors where the financial, business and consumer sector saw a fall in the valuation by -39.89percent, -4.15percent and -48.92percent respectively. In case of Energy and TMT sector the valuation increased by 18.97percent and 6.81percent respectively. Transport, Pharmaceutical and Construction were the major gainers at 68.93percent, 167.82percent and 28.28percent respectively. Real Estate, Defense and Chemicals were again the losing sectors where the valuations fell by -15.47percent, -50.35percent and 6.91percent respectively. Here we see that the effect of the recession was somewhat mixed where the loss of one sector seemed to be the gain of the other sector. Pharmaceutical and Transport were the major gainers while Defense, Consumer and financial sector were the biggest losers.

Figure 4.6.1: Change in Sector-wise Valuations Levels across 2008-09



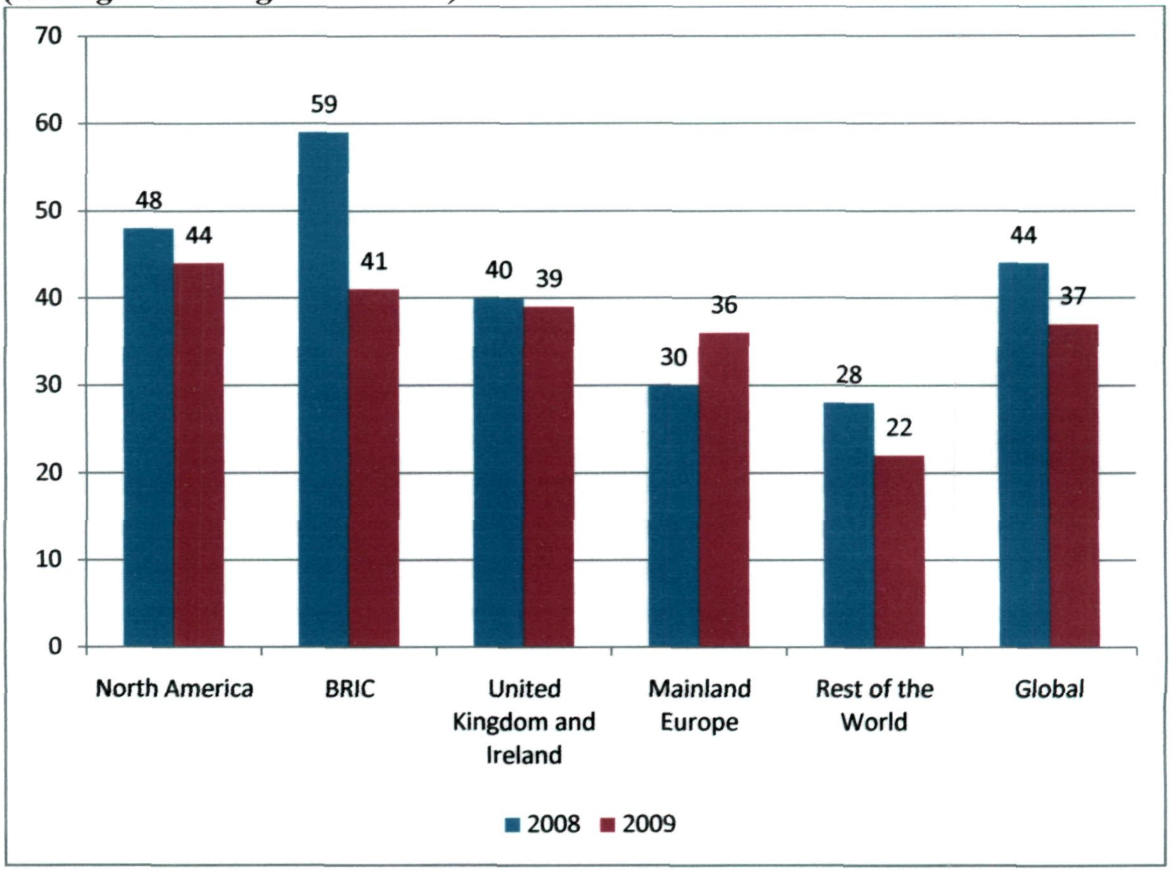
Source: Sharma, Nimesh "Mergers and Acquisitions in times of Financial Crisis" Retrieved from http://www.dare.co.in/strategy/business-essentials/mergers-and-acquisitions-in-times-of-financial-crisis.htm (1 March 2010)

4.7 Future Global Prospects

Having seen the impact of recession on the Mergers and Acquisitions (M&A's) deals it is interesting to have a look at the Grant Thornton, International Business Report, 2009 which provides a survey about the potential future Mergers and Acquisitions (M&A's) deals. In Figure 4.7.1 while the BRIC countries (Brazil, Russia, India and China) rank the highest in 2008 at 59percent, their rank falls in 2009 as the percentage falls to 41percent. North America also ranks high with the percentage in 2008 at 48percent and that in 2009 at 44percent. The percentage for UK for 2008 is at 40percent while for 2009 it falls to 39percent. Europe stands at 30percent in 2008 and 36percent in 2009. The Global average is at 44percent in 2008 while 37percent in

2009. Hence it is seen that it is just Europe which is expected to actually do a larger number of deals in 2009. From the above discussion we see that that global picture is altering where the economic focus is shifting to the developing countries from the developed countries. It can be said that the decline in Mergers and Acquisitions (M&A's) is felt less in the developing countries. Hence the trend of consolidation and global structuring seems to be undergoing a paradigm shift in structure.

Figure 4.7.1: Planning to grow through Acquisition in the next Three Years (Average Percentage of Business)



Source: Mergers and acquisitions: Opportunities for Global Growth; Grant Thornton International Business Report 2008. Retrieved from http://www.internationalbusinessreport.com/files/ibr_2008_ma_report_final.pdf

4.8 Conclusion

This chapter showcases the development and popularity of mergers and acquisitions (M&A's) as a tool for expansion and development. It is seen that the developing economies and especially the BRIC economies are moving on the scale of merger and acquisition deals at a very rapid pace and are appearing as an attractive destination for investment for major economies. The motivation behind cross border deals is discussed at length to highlights its use as a potent tool for investment and growth. The analysis of deals reveal that the pharmaceutical sector along with construction and energy is attracting maximum merger and acquisition deals. In fact even in the wake of recession these sectors are managing to register a growth in the number of deals affected. The future global prospects stress on the growing economic prowess of the developing economies which intend to indulge in mergers and acquisitions (M&A's) at a brisk pace.

Having discussed international scenario related to Mergers and Acquisitions (M&A's) the next chapter throws light on the problems and issues dealt with in this thesis. A brief review of literature of various studies on mergers and acquisitions (M&A's) is made. It reviews relevant journals, books and theses to develop an understanding of the topic and traces the research gap on the basis of which the study has been designed.

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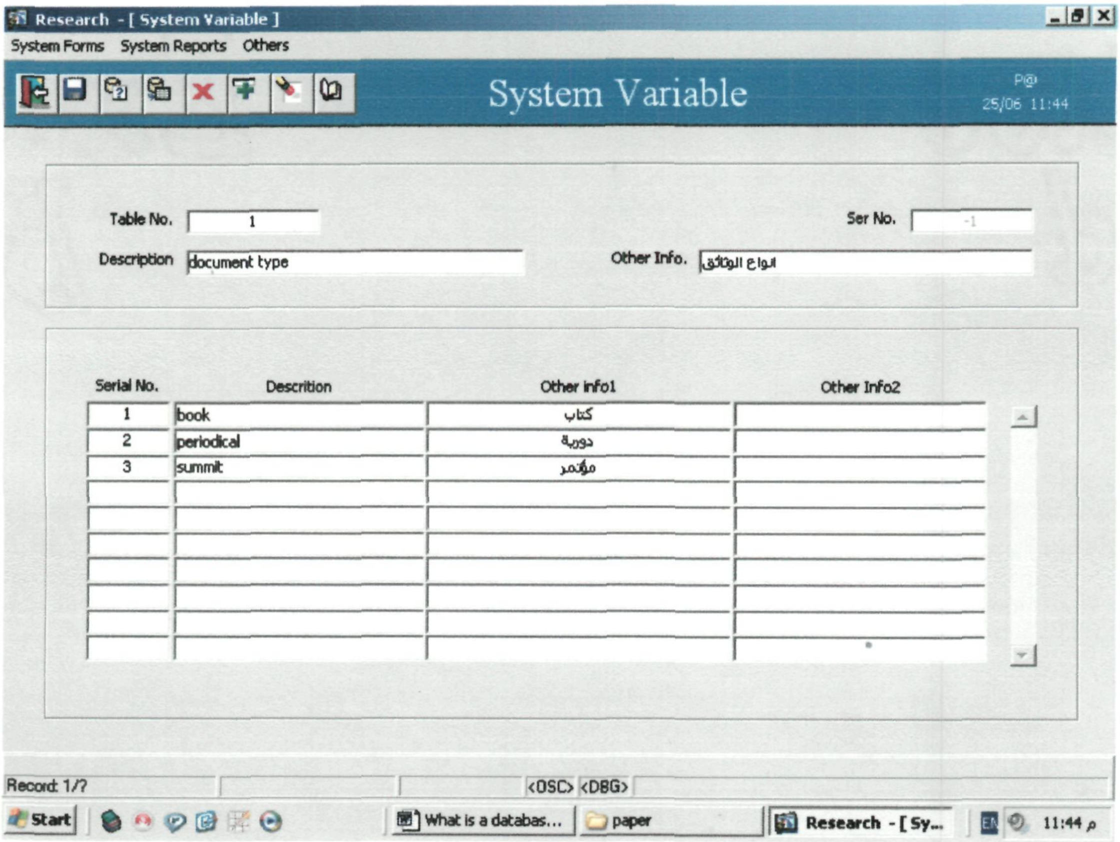
Some of the tools of oracle are:-

- SQL/PLUS.
- Oracle Form Builder.
- Oracle Report Builder.
- Oracle Graphics Builder.
- Oracle Designer.

The system contains three main forms as follows:-

1- **System Variables:** It is used to define document type, languages, Universities.



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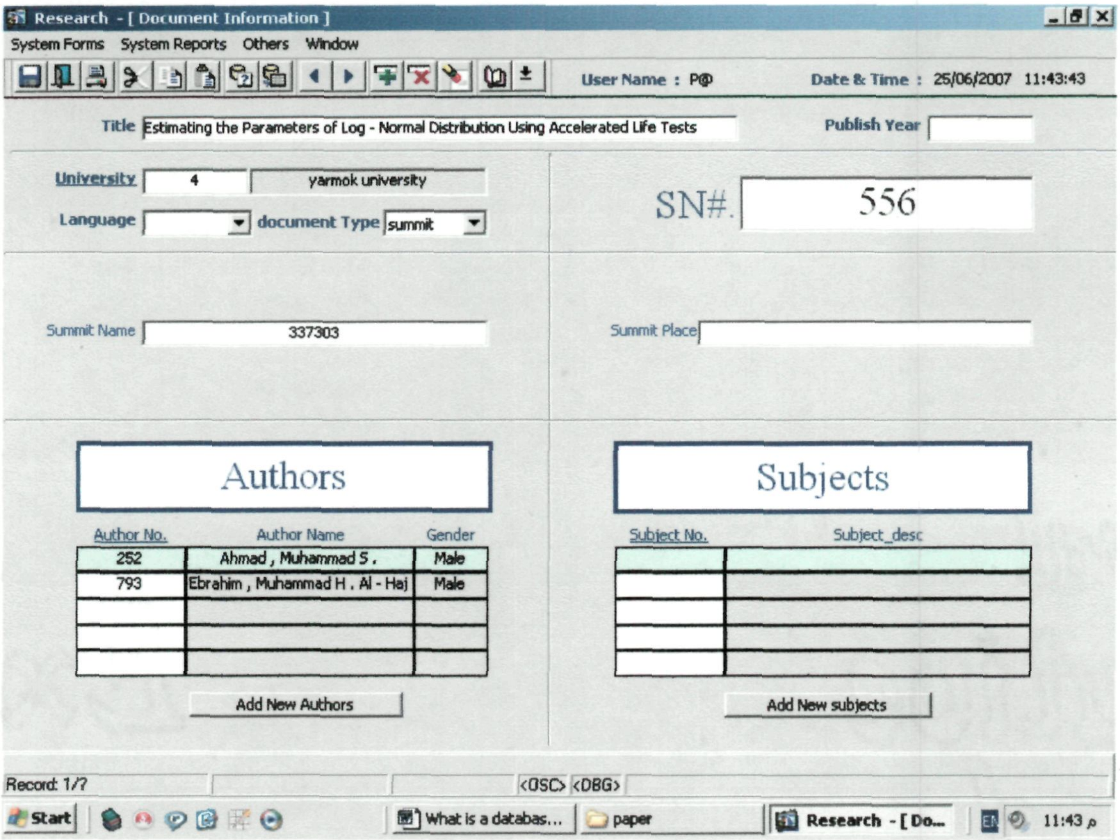

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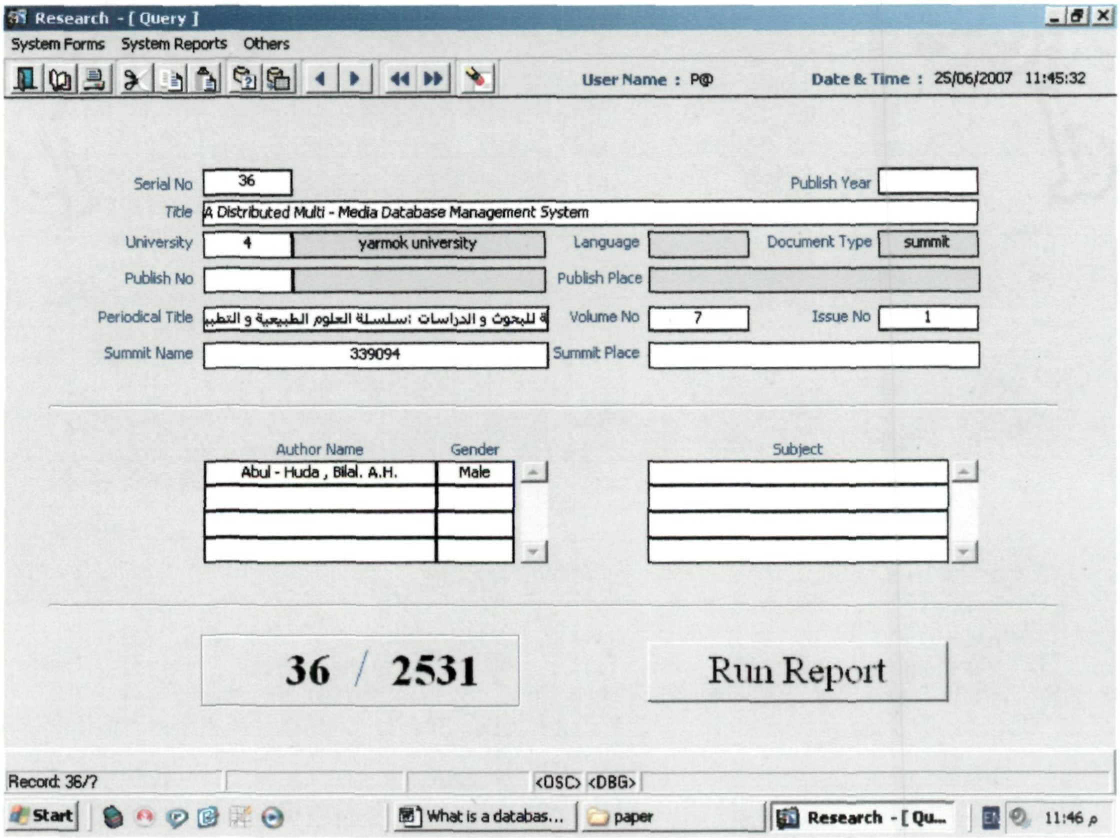

The Oracle database also contains many reports and statistics as follow:-

Research by author number,

Research by author gender,

Number of research,

Authors' list,

Subjects' list,

Dynamic statistic report,

Dynamic general report, this report allows user to build his own report by choosing field and determining the condition of report.

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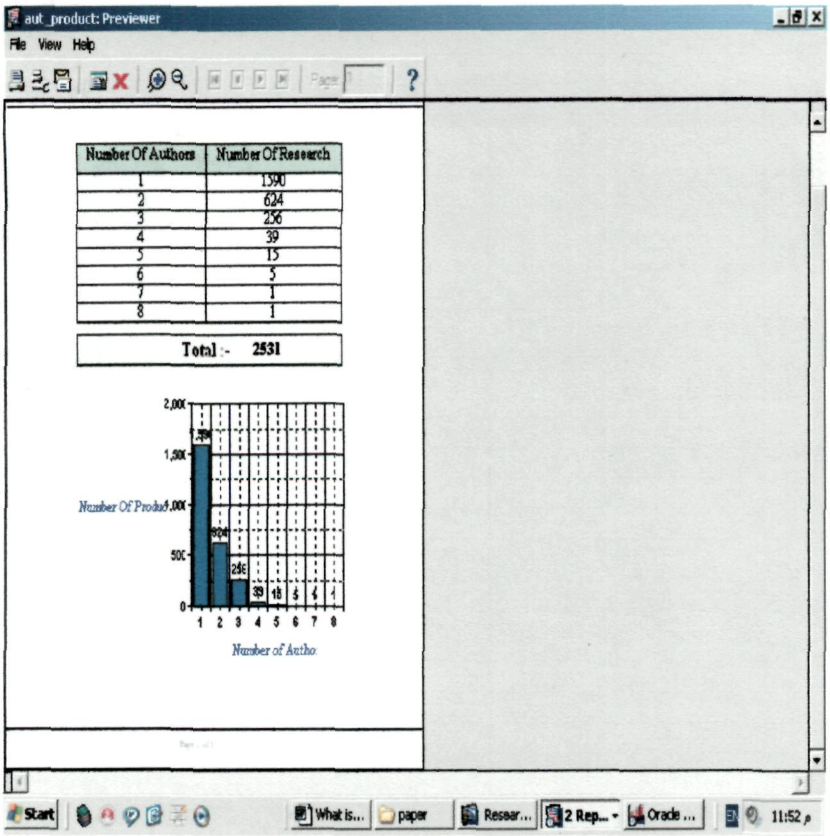
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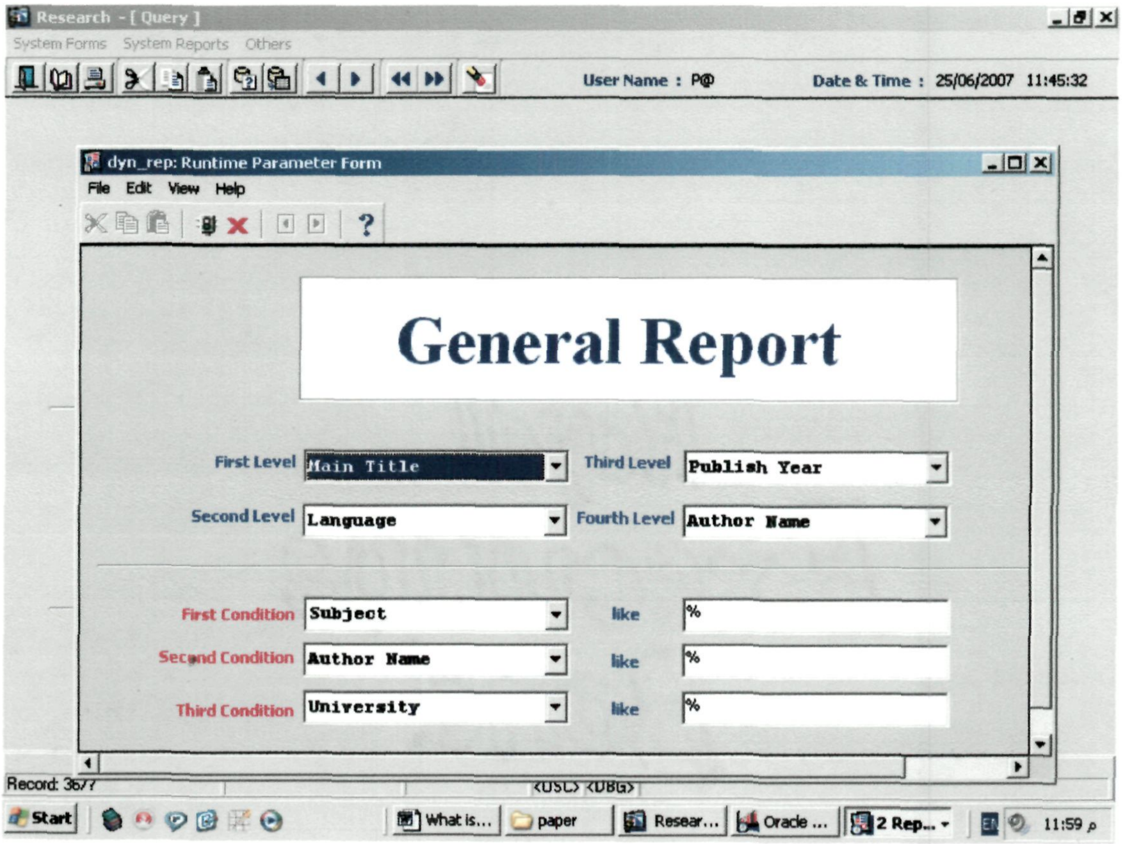
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Chapter 5

Statement of Problem and Review of Literature

5.1 Introduction

5.2 Statement of Problems and Issues

5.3 Chronological Review of Literature

5.4 Research Gap

5.5 Conclusion

5.6 References

Chapter 5

Statement of Problem and Review of Literature

5.1 Introduction:

The antecedent chapter dealt with Mergers and Acquisitions (M&A's) in the global economy and analyzed the deals that have taken place in the international arena in various sectors. Its growth as a tool for development and expansion is evident by the recent trend examined by the Researcher. In the present Chapter the statement of problem and issues relating to the thesis are stated. It is followed by a critical review of various literatures available on Mergers and Acquisitions (M&A's). The Researcher has reviewed research papers, books and thesis dating from 1972 to 2010 for the purpose to provide an insight in to the work related to Mergers and Acquisitions (M&A's). An attempt has been made to make a critical review of the available literature in order to trace the research gap and design the study for the thesis.

5.2 Statement of Problems and Issues

5.2.1 Statement of Problem

The study under investigation here is related to analyzing the profitability of Mergers and Acquisitions (M&A's) of Indian Steel Industry since Liberalization. Also the Researcher makes an attempt here to investigate the impact of the merger on the profitability of the merger. It is seen whether the merger undertaken is in the interest of the parties involved that is the shareholders, management, employees, creditors etc. of both the target and bidder firms.

5.2.2 Issues

a. Synoptic view of Mergers and Acquisitions (M&A's):

Sector-wise analysis of Mergers and Acquisitions (M&A's) in the international and domestic arena is made to develop an understanding of the ongoing trend in the global and domestic arena.

b. Indian Steel Industry:

A brief study of the Indian Steel Industry is made in terms of growth and development and a synoptic view of major Mergers and Acquisitions (M&A's) is made.

c. Post Merger Valuation:

The major issue this thesis deals with is the effect of the merger and its measurement in terms of the post merger financial performance. The Researcher makes an attempt to identify the effect of the merger on the performance of the companies involved in order to establish the viability of the merger.

d. Identifying the Variables Effected by the Merger:

Various statistical and accounting techniques are employed to calculate various variables and statistics related to the company and an attempt is made to find out the effect of the merger on them.

e. Identifying the Cause for Movement in Figures:

Another issue dealt with in the thesis is yearly analysis of the movement in figures and studying them in the light of both macro and micro factors.

f. Impact of Recession

A major issue faced is the financial crisis which hit the world economy in the year 2007 and had a deep impact on the Mergers and Acquisitions (M&A's) worldwide and also the valuations and post merger profitability of firms where operation were affected more by the macro factors than the micro factors.

The year 2007 was marked by a global financial crisis which started due to the sub-prime mortgage crisis in the United States of America and later caused a severe liquidity and credit crisis adversely impacting almost all the major economies of the world. However it did not have a major impact on the number of M&A's deals affected in the financial Year 2007 which amounted to $1637 billion which was 21percent higher than the previous record which was set in 2000[1]. As a matter of fact the latter half of 2007 witnessed the $98 billion acquisition of ABN-AMRO Holding NV by the consortium of Royal Bank of Scotland, Fortis, and Satander which was the largest deal in banking industry at that time and the acquisition of Alcan (Canada) by Rio Tinto (United Kingdom). Despite the environment of uncertainty and fear prevailing in the economic sector it is worth noting that FDI inflows in developing countries surged by 33percent in 2007 to reach $1248 which was another world record. Also, the United States continued to be the world's largest FDI recipient country. In the European Union there was a fresh wave of M&A's due to the revamping exercise which took place in the enlarged European Union market. However the global financial crisis is having its toll on FDI with M&A's in the first half of 2008 slowing down as compared to the latter of 2007[2].

From the Indian perspective the growth rate is shrinking today. While it averaged 8.8percent in the past five years a negative growth rate of 1.5percent was recorded for February, 2009 although it was over 9percent during the previous year. The movement of the BSE Sensex was also between 8000 to 10000 points which is symbolic of the weakness of the Indian markets. The status of FDI's was indeed the surprise factor with it being not influenced much by the economic turmoil. As a matter of fact FDI for the year ending March 2009 was at US $ 27309 million which was 11percent increase over previous year[3]. The withdrawal of FII's severely affected our fore reserves. However, one can safely say that the fundamentals of Indian economy have shown resistance due to which the global financial crisis has not crippled our economy as it has done many other world economies. A tight monetary policy was pursued as a result of that which eventually dried domestic liquidity and firms had look for external financing which had an adverse impact due to the prevalent financial turmoil and depreciation of Indian rupee. Though the bank rates have been cut considerably, a lot more is desirable to be done in this field keeping into account the depth of the crisis.

5.3 <u>Chronological Review of Literature</u>

Shick, Richard A. (1972)[4] worked on a paper whose main purpose was to determine if mergers and acquisitions increase return on investment for the shareholders of acquiring firms for which an equation is formulated. Samples of chemical industry are taken for the analysis. He also questioned earlier works that stated mergers do not create value for shareholders. Though the sample size is relatively small for evaluating mergers in general, results indicate that success or failure of mergers was immediate and fairly constant and that this merger evaluation technique can be successfully employed. **Aaronovitch, Sam and Sawyer, Malcolm C.(1975)**[5] studied in their paper the impact of mergers on growth and concentration of firms and attempted to find the relation between the size of firms and acquisition intensity and also whether acquisition activity by firms persists through time. The authors suggested that for concentration purposes the dynamic aspect should be considered along with the static aspect. The findings of the study were that acquisition contributed to the growth only marginally. There was no trade-off between internal and external growth and also found that large firms had better survival record than smaller firms. Also it was found that growth was not systematically related to growth. However, the study has been drawn from a study of a sample for a particular period and cannot be applied generally and especially in today's circumstances. Attempts have been made previously to evaluate the effects of mergers but suffer from shortcomings. **Honeycutt, T. Crawford (1975)**[6] mentioned the Lev and Mandelkar's (L&M) attempt to highlight corporate mergers effect upon various aspects of a firm's performance by using a paired sample technique, pairing merging firms with control firms that are non-merging but are of identical size and within same industry but the conditions of pure competition that are assumed seldom exist indicating that that the LM samples were poorly selected where only 18 out of 62 met requirements. Other contradictions were also reported and it can be seen that the observed results of the study are not conclusive.

Nagaraj, K. (1977)[7] made a study of issues related to iron and steel production in India. India's competency in producing iron and steel is highlighted where all vital raw materials are available in abundance. An analysis of the five year plans is made to scrutinize government policy towards steel and also the rationale behind keeping steel under public sector as it required heavy capital investment. However, the public sector instead of becoming an exchequer to the government ran into financial losses and became a burden instead which paved the way for the growth of private sector. The production and growth in demand for steel during the period was analyzed and the impact of the worldwide recessionary trend was also examined. However, the study is dated a long period back and various changes have been incorporated since then and its relevance is questionable. **Firth, Michael (1979)**[8] , examined the profitability of recent takeover and mergers using an efficient market theory framework. Conflicting earlier works the author found that there were no gains associated with takeovers and there was actually a very small loss incurred in the period 1972-4. The stock market reactions were generally correct and needed no corrections on an average. The study found that takeovers were generally were for growth purposes. It also found that acquired firms earned huge profits which were set off by the losses made by the acquiring firms and the premium paid was a major determinant for that. Also maximizing the management utility was found to be a major objective behind takeovers. However, lots of conflicts with earlier works are found here and this study cannot be relied in totality. **Yeager, Mary A. (1980)**[9] discussed trade protection which is granted as a subsidy and a protection measure to an industry. It is a common phenomenon for USA and American Steel Industry depicts the mechanism for the application of trade protection as a commodity input into Steel Industry. Protection is viewed as a 'commodity input in the production of steel' and a vital factor in the ever changing national and international economy. In the post-war era steel as viewed as a priority sector for empowering self-sustained growth and trade protection was vital to compete in the international market. However the relevance of the study in the present arena is questionable where tariffs and protections measures employed by countries are a burning issue with the failure of the WTO talks. The increasing growth and stature of developing countries like India and China has forced the developed countries to re-think their strategies towards providing heavy subsidies and protection to its domestic industries.

Shughart II, William F. and Tollison, Robert D (1984)[10] prepared a paper by using annual data on US mergers from 1895 to 1979. Though the sample size is small it was earlier deuced from the same data that mergers occur in 'waves' but this study fails to reject the hypotheses that merger levels are characterized by a white-noise process or by a stable first-order autoregressive scheme. However the authors accept the various limitations and assumptions

Jemison, David B. and Sitkin, Sim B (1986)[11] in their paper suggested that choice perspective be supplemented with a process perspective according to which acquisition process itself is a critical factor determining acquisition activities and outcomes. According to them attention should be focused on acquisition process which is discontinuous and fractionated and it re-enforces four impediments, i.e. activity segmentation, escalating momentum, expectational ambiguity and management system misapplication. The paper focuses on acquisition process prior to the merger but overlooks the post-merger implications.

Polonchek, John A. and Sushka Marie E. (1987)[12] viewed mergers as an outcome of a firm's capital budgeting process where the two explanatory variables are 1) cost of capital and related financial effects 2) output effects. A model on merger activity is developed by integrating the literature on aggregate investment in fixed capital into a micro-finance framework. The results from the model indicate that mergers pattern is considerably affected by economic activity and financial conditions. They also emphasized that conglomerate boom of merger activity in 1967-9 was in line with merger behavior during the remaining of the period. However financial and economic reasons do not alone determine the level of merger activity. **Lubatkin ,Michael. and O'Neill, Hugh M. (1987)**[13] examined the relation between merging firms and risk components by dividing 297 mergers into four relatedness categories and three measures of risk- unsystematic, systematic and total. They claimed that mergers can be used as a tool to reduce external risks but the reasons attributed to it are not true. They used various statistical tools in their research and found that despite the relatedness of the mergers, unsystematic risk for the acquiring firm increase post-merger. They noted a considerable decrease in systematic risk in case of related mergers. Also single, unrelated and vertical mergers were found to be not associated with minor decrease in total risk. They concluded that mergers are closely related with increased levels of systematic and total risk and are strongly influenced by market conditions. However their study suffers from various statistical limitations where various characteristics and conditions of merging firms are ignored. **Nahavandi, Afsaneh and Malekzadeh, Ali R (1988)**[14] presented a model which focused on process of adaptation and acculturation in M&A. They observed that the degree of congruence between acquirer and acquired organization's preferred modes of acculturation will affect the level of acculturation stress. They even proposed an interdisciplinary model of planning and implementation of mergers as a strategic alternative. However the model explores only three variables and more theoretical exploration is required. **Davidson III, Wallace N. et al. (1989)** [15] did a study that re-examined the revaluation of shares surrounding the cancellation of mergers over the years 1976-85. They concluded that the revaluation that Dodd (1980) found disappears when target firms do not get engaged in consequent mergers but they do persist when targets take part in subsequent mergers irrespective whichever party cancels the merger. However, if the mergers are cancelled by a party other than target/bidder firms there is no permanent share revaluation as these firms are not involved in subsequent mergers. Also bidders generally do not gain from mergers that fail. The paper concentrates on failed mergers and not profitability of mergers. **Trautwein. Friedrich (1990)**[16] surveyed theories of merger motives and divided them in to seven groups. He attempted to order them according to plausibility and consistence with the evidence. He suggested that merger motives be viewed in the framework of decision processes, conflicting goals and ambiguous private information. The importance of capital market efficiency theory was highlighted and the study was based on actual performance rather than stock market studies. However the validity of efficiency theory and merger prescriptions is debatable.

Slusky, Alexander R. and Caves, Richard E. (1991)[17] , tested the value created by mergers on premia paid in a sample of 100 recent acquisitions. They analyzed the determinants which were responsible for creation of value in mergers, i.e. real and financial synergies, behavior of mangers in both target and acquiring firm, arbitrage between real and financial assets. The evidence indicated that there was no evidence of real synergies, some evidence of arbitrage and clearly significant effects of both agency and financial synergy. Statistical limitations however do exist. **Vithala, R. Rao. (1991)**[18] dealt with the recent spurt in M&A activity in USA which has created a situation where firms are looking to identify complementary firms to carry out expansion and diversification plans. Based on Farquhar and Rao, Balance Model an attempt is made to evaluate and screen the potential acquisition partners using experimental methods where the context of the cosmetic industry is taken for the application of the model. They concluded that the balance model is quite appropriate for taking decisions related to acquisition, multi-firm acquisitions and evaluating the role and impact of brand strength in acquisition/divestment. According to them, the success of a merger depends to a large extent on the balance between the merging partners. However, the model was tested in a limited manner and there is scope to test it further. Due to complex nature of each merger its predictions cannot be generalized. Evaluation of post-merger profitability is absent. **Levy, Haim (1991)**[19] talked about the CAPM and GCAPM model for explaining synergies from mergers. As per the CAPM model all the investors hold risky assets, the mean return should not be related to the size of the firm and the risk premium should not be related to the specific risk of the firm and the value additivity principle holds. The fourth implication is harder to test. The GCAPM suggest about the breakdown in the value additivity which explains Mergers and Acquisitions (M&A's). It further suggests that profits may become negative in the case of additional mergers if they are continued beyond a certain limit. Also small firms earn an abnormal profit. These results are not in sync with what is predicted by the CAPM model. The paper concludes that that Mergers and Acquisitions (M&A's) in general can be explained by GCAPM and economies of scale in production do not characterize the conglomerate merger waves. However the assumptions undertaken in the model may not be always applicable in the real market.

Mcguckin, Robert H. (1992)[20] studied the effect of horizontal merger by analyzing the share prices of the rivals to the merging firms. For the purpose a standard market model is developed and it is found that that merger premium for rivals is much less than that for the merging firms. However the study relies on mainly market data and information which is ambiguous and cannot be relied on. Also the study cannot be used in cases where the merged firm has no rivals. There is a scope to use other options like bond, options and future prices too. **Agrawal, Anup. et al. (1992)**[21] attempted to investigate the post-merger performance of acquiring firms using a virtually comprehensive sample of mergers between NYSE acquirers and NYSE/AMEX targets and it is found that stockholder's of acquiring firms suffer a loss of 10percent which is statistically significant. The study also reveals that the firm size effect and beta estimation are not the cause of the negative post-merger returns. A hypothesis is also assumed to find whether this result is caused by a slow adjustment of the market to the merger event but the results do not support the hypothesis. However the reasons leading to the wealth loss are not studies in this paper. **Schumann, Lawrence (1993)**[22] examined the impact of the announcement of the mergers on stock prices and suggested that it is difficult to identify the source of gains accruing to the target and bidder firms. Abnormal stock returns of the firms which undertook horizontal mergers and their rivals were examined. A study is made of the mergers challenged by the Federal Trade Commission over the period 1987-89. It examines and questions the effect of such mergers in mitigating the competition as according to the Researcher abnormal returns on an average are earned by the rivals when the announcement of the merger is made. Also the anti-trust complaints on the smaller and larger rivals are scrutinized and it is suggested that the abnormal returns might be causing higher prices. According to the Researcher, the results do not support the view that the challenged mergers were anti-competitive and the federal anti-trust authorities generally challenge the horizontal mergers which would enhance competition and lead to lower prices. According to the research paper the abnormal returns of an anti-competitive merger is positive at the time of merger announcement and negative in anti-trust challenge. In case of efficiency enhancing merger, the pattern is difficult to determine. Efficiency that occurs as a result of the merger may lower the prices and enhance the competition and it may also result in a situation where major players merger to form a cartel of sort leading to higher prices.

Achampong, Francis. K and Zemedkun, Wold (1995)[23] in their paper discussed the interest of the management in a merger decision and makes a study of the various factors influencing it for which non-parametric statistical tools are used. It further elaborates that personal interest might also play a part and this aspect is explored ethically in the light of various theories. It is suggested that as mergers dilute the internal ownership it benefits the management as they can greater control and use the finances as pleases them. Various ethical theories are provided to provide guidelines on the basis of which a decision related to a merger should be taken by the mergers to protect the interest of the shareholders. The managers should not base their decision for personal gains under the pretence of ignorance. The study shows that self-interest plays a critical role and ethical theories can be used as a basis. However these cannot be forced on the management as it is a matter related to conscience, values and principles and it is difficult to keep a check or frame a legal framework for the same.

Lee, Kyungmook. and Pennings, Johannes M. (1996)[24] said in their paper that resource complementarity and organizational compatibility are vital factors affecting M&A outcomes. They analyzed 461 M&A's in the history of Dutch Accounting Industry during the period 1880-1990 and focused on two classes of events following M&A's-organizational dissolution and involvement in subsequent M&As, with the firm continuance following the M&A as the "non-event." They analyzed both the acquiring and acquired firm and mainly focused on the survival of the created firm. They concluded that compatibility is not associated with the dissolution rate but related to the probability that the firm will engage in additional M&A's. According to them for finding a strategic fit it is imperative to find complementary partners or firms with which it would be profitable to integrate and would also permit full utilization of resources. Undertaking future acquisitions can always not be a cited as a reason for determining whether a Mergers and Acquisitions (M&A's) is compatible or not. Also the study is based on a single industry and cannot be generalized. Also the study does not undertake financial appraisal to determine merger success.

Lubatkin, Michael. et al. (1998)[25] took the case of firms of Britain and France to analyze the concept of administrative approach as reflected in the four integrating mechanism, i.e. structural, systems, social and managerial. In cross border mergers the administrative approach was reminiscent of respective national heritages. They concentrated on studying the influences that administrative heritage has on the integrative mechanisms used in domestic and cross-national mergers. They concluded that the acquiring firms were generally stable in their policy making and made both strategic and resource decision centrally or allow their subsidiaries complete latitude. A suggestion is made to establish a transnational network which would link headquarters and subsidiaries in an asymmetrical integrative mechanism. However the study is conservative in context with the global environment where mergers are becoming increasingly popular as it is based on two nations only, i.e. Britain and France. Also implementation costs of administrative heritage and influence of these costs are ignored. **Barnes Paul (1998)**[26] attempted to make a foray in predicting and identifying takeover targets. He took cue from cases in UK and USA where takeover targets are chosen and forecasted by employing methods like bankruptcy position. According to him published accounting data alone or along with share price changes would not serve the purpose of effective forecasting. He concluded that his study supported efficient capital market hypothesis. This paper is mainly based on the predictive accuracies of the model but the results showed that takeover targets could not be predicted. **Fluck, Zsuzsanna and Lynch, Anthony W. (1999)**[27] examined a recent trend where there is a tendency by firms to divest post-merger and it is noted that these firms performance is satisfactory in the interim period. A theory and model of mergers and divestiture is prepared to explain the said phenomenon in creation of value-increasing mergers. Also it demonstrates merging as a technology that allows marginally profitable projects to be undertaken and finds no diversification benefits associated with merger. It predicts that conglomeration which is undertaken to utilize financial synergies increases in situations when profitability is low and when managers at helm are in total control. However changes occurring in different business cycles are difficult to predict. The theory is applicable in situations of financial stress and those facing managerial problem and cannot be universally applied. **Komoto, Keisho (1999)**[28] examined the increasing trend in mergers and acquisitions in 1999 and explored the post-merger results through Return on Assets (ROA) and equity ratios for analyzing earnings and financial conditions respectively. The financial statements of listed companies in a particular industry based on Tokyo Stock Exchange's 33-industry classification were used to find industry indicators for calculating the pre-merger and post-merger values. They found that mergers do not have a significant impact on business performance and effect on stock prices fluctuates depending on the industry involved. However, due to small sample size their results cannot be statistically verified.

Walker, M. Mark (2000)[29] investigated the impact of corporate strategy on the acquiring firm's shareholders by examining a sample acquisitions between January 1, 1980 and December 30, 1996. The results of the study were that acquiring firm's shareholders earn higher returns following cash offers and in takeovers that expand the firms operations geographically or increase its market share. However there was no evidence to support whether acquiring firms consistently gain a strategic advantage over rival firms. He suggested that acquiring firms managers should carefully consider the amount and mode through which premium is paid and also contemplate about alternatives to corporate takeovers. The interests of the acquired firms' shareholders are not taken into account though.

Kang, N and S. Johansson (2000)[30] analyzed the recent trends, both inward and outward in Mergers and Acquisitions in various developed and developing countries especially in OECD countries across various sectors and industries such as the automotive, telecommunications, steel, oil and gas, and pharmaceuticals and also stressed on various factors which led to a spurt in M&A's that increased six fold during the period 1991-98. M&A's popularity as a direct mode of investment over other modes like greenfield investment is due to various factors at the macro level, industry level, firm level, technology related and government related. They further pointed that, "However, the main driver of M&A's in place of greenfield investment is the need to acquire complementary intangible assets –technology, human resources, brand names, etc." It concludes that an efficiently structured merger leads to improved performance and efficiency of both host and home countries and also the individual firms involved. However the business environment surrounding mergers and acquisitions plays a crucial role in the success of M&A's. The financial performance of the firms involved is however not analyzed. It is the trends which are examined in detail. **Kumar, Nagesh. (2000)**[31] recognized the growing importance and role of Mergers and Acquisitions (M&A's) in industrial restructuring and FDI all over the world which is one of the major reasons for the recent boom in M&A activity. He made an attempt to explore the M&A's in Indian Corporate sector associated with foreign MNE's and their Indian affiliates for the period April 1993 to mid February, 2000 to analyze the industrial composition and motives behind the deals. Liberalization of FDI policies is cited as a major factor for the enhanced volume of M&A's. It is found that the majority of deals were in the manufacturing sector and a rapid growth is being registered in the service sector. The mergers are found to be predominantly horizontal in nature. The nature of study is however, mainly descriptive where the policies, framework and environment surrounding M&A's are studied. Evaluation of mergers in terms of synergies and value created as a result of the merger is not done. **Ghosh, Aloke and Lee, Chi-Wen Jevons (2000)**[32] examined the association between abnormal returns and expected managerial performance of target firms and found that there are alternative motives behind acquisition. They analyzed a sample of 338 target firms and found that investors are more optimistic about disciplinary rather than non-disciplinary acquisitions. Agency theory suggests that economic gains/abnormal returns from disciplinary acquisitions will be higher when target firms have agency problems. They concluded that target firms with high abnormal returns are primarily acquired to discipline target firms. The gains available to shareholder are analyzed but the financial performance of the firm after the merger is not studied.

Lyons, Bruce. R (2001)[33] reviewed the success of mergers as a corporate strategy and for the purpose a framework was designed to explain the concept of profit decrease in horizontal mergers due to exogenous increase in competition. It is also stressed that in case of unprofitable situations, mergers are a preferable mode of exit. It is suggested that the major aim of the competition policy should be the welfare of customers and not providing management consultancy from the funds of the shareholders. However the study is limited to horizontal mergers, a particular kind of market structure. The post-merger synergies and other issues and complications arising after the merger are not dealt with over here.

Ahuwalia, Montek. S. (2002)[34] analyzed the economic reforms of 1991 which were a necessity in the wake of balance of payment crisis that pushed India towards being an open economy and eventually made it the fastest growing economy of the world. Implications of Industrial Policy 1991, Trade Policy, Infrastructure Development, financial Reforms etc are explored. He feels that though the reforms were formulated in a broad perspective absence of labor market reforms is felt. Liberalization measures in agriculture are advocated. Areas where reforms have not yielded the desired results are highlighted and suggestions are made towards the same. However the study is devoid of a comprehensive and clear cut mechanism for successful implementation of reforms in core sectors. **Lall, Sanjay (2002)**[35] discussed the growing popularity of Mergers and Acquisitions (M&A's) as a strategic tool in investing overseas. It is now majorly responsible for bulk of FDI in developed world and increasing shares in developing world. The paper attempts to investigate the associated economic costs and benefits. According to the author, FDI and Mergers and Acquisitions (M&A's) are propelled by identical factors like technology, globalization, competition, liberalization etc. in the comparative analysis made in the paper the author opines that Mergers and Acquisitions (M&A's) are superior to FDI as an investment tool. However the paper mainly focuses on theoretical analysis involving the advantages and disadvantages surrounding Mergers and Acquisitions (M&A's) and FDI and there is no analysis or comparison on the basis of value or synergies created after the merger.

Brito, Duarte (2002)[36] in his paper discussed the welfare impact of a merger and promoted the use of complementary entry analysis by authorities for evaluating mergers. The purpose is to impress upon the fact that besides the post-merger impact study, the viability of the merger should be evaluated and also merger as a mode of entry, should be compared to other alternatives especially in issues relating to competitive firms. The main idea is to enable the authorities to have first-hand information about cost reductions to take a decision on efficiencies on the basis of which the decision to reject or accept a merger can be undertaken as the firms might exaggerate the value of the proposed cost reductions unduly. For the purpose a model is developed and the Researcher concludes that in the task of calculating the profitability of the merger, an analysis is required to measure the efficiency gains involved. The two important considerations are the number of insiders and the cost reductions involved. An input is provided here to the authorities to use this model for the purpose of maximising customer's surplus and ensuring maximum welfare. However it is to be noted that when a merger is undertaken, the authorities do not evaluate them only on the basis of cost reductions and other economics involved. The level of priority of goods concerned, nation's security, trade policy, foreign policy etc. are various other determinants employed while rejecting or accepting a merger proposal. **Erard, Brian and Schaller, Huntley (2002)** [37]opined that regarding various issues related to M&A no optimizing model has been prepared yet. In this paper they prepared a model to link a firm's acquisition activities to its investment choices. A sample of 503 firms is taken and based on standard assumption, a theoretical framework is developed which predicts that both investment and acquisitions are positively related to firm's shadow value of capital. Investment and acquisitions are studied as a mode but post-merger analysis is not done. **Mazumder,**

S Mitra and Ghoshal, T (2003)[38] in their paper talk about the various challenges faced by the Indian Steel Industry in a globalized arena and does a SWOT analysis for the same. Various measures are suggested for bringing about a turnaround for effective survival and growth. It studies the various problems and turmoil's that surrounded the steel industry. A deep and intensive study of the Indian Steel Industry is made as regards various major plants. Further various problems and challenges are discussed relating to price, demand, consumption and globalization. Various strategies are suggested but theory and practice may not be the same. Besides no practical model is used to test the solutions and strategies suggested.

Weber, Roberto A. and Camerer, Colin F. (2003)[39], conducted laboratory experiments to examine merger failures which emerge as a result of conflicting organizational culture. It is generally observed that corporate mergers fail and an attempt is made to study cultural conflict as a reason for the same as this dimension is generally ignored during valuation of firms leading to overpayment. Cultural incompatibility makes it difficult for employees of the merged organization to view things in the same perspective. The study concludes on the note that in the absence of a mechanism to create co-ordination, cultural conflicts arises resulting in failure of mergers. However, causal affects of cultural integration is yet to be determined. Despite the effort it is observed that culture is a diversified phenomenon and no prescribed and universal formula can be applied in different situations. **Perry, Jeffery S. and Herd, Thomas J. (2004)**[40] in their paper devoted attention to the increasing number of failures being reported in the mergers taking place and he attributed them to poor synergy, bad timing, incompatible cultures, off strategy decision making, hubris and greed. According to them there is generally a huge gap between planning and implementation due to which exercising due diligence becomes inevitable in the challenging global environment. They suggested various tips for structuring successful mergers and emphasized on employing professional services to calculate expected synergies and other complex issues for effecting successful mergers and acquisitions. The solutions or the guidelines offered in the form of a theoretical framework and may have certain implications and problems when applied practically.

V, Harsh H. and Srividya, C.G. (2004)[41] examined the rationale and superiority of M&A's over other modes of investment which according to them were easy entry, snuffing competition, access to funds, tax benefits, capturing market share etc. They discussed dynamic valuation techniques which are earning based valuation, market based valuation and asset based valuation. The choice of method depends on a host of factors like timing of sale, stock market situation, economic cycles, and global situations etc. Case studies was done on IBM's acquisition of Daksh e-services, Citigroup's acquisition of e-Serve International and a hypotheses on a listed software company merging with a unlisted company. They concluded that a large number of methods should be employed to derive a range of values for calculating the valuation of a firm keeping in mind the risky issues related to synergy realization e.g. social and cultural issues. Financial and profitability analysis of the merging firm is not done though to evaluate the mergers undertaken. **Nocke,Volker and Yeaple, Stephen (2004)**[42] provided a theoretical framework of international commerce for analyzing the pros and cons of various modes of investment where key factors are heterogeneity in firm's capabilities, international mobility of these capabilities and their price determination based on endogenous supply and demand. Through equilibrium analysis of a model, equilibrium pattern of export, greenfield FDI and international mergers is determined. Through statistical tools, models and equations it is shown that for the composition of international commerce source of firm heterogeneity is a vital factor. Also cross border mergers and acquisitions involve either the most or the least efficient active firms depending on whether the firms differ in their mobile or non-mobile capabilities. The merger market clearing condition is also considered as an important aspect where the effect of country and industry characteristics on aggregate industry efficiency is mediated by the merger market. They also concluded that cross border M&A's are noted to be generally less beneficial to host country's economy than greenfield FDI. However, the firm's characteristics assumed in this model might not exist in all cases.

Bruner Robert (2004)[43] dealt with the various applications associated with mergers and acquisitions. It throws lights on the ethical issues and the rationale of entering into deals. The strategies and the origin of transactions are traced. The various waves and drives of merger and acquisition activities are discussed. The methodology and strategy to be adopted for affecting a deal and cross border deals are examined. The various methods and ways that can be adopted for valuing a firm prior to the merger and also the resultant synergies are proposed. It is followed by an elaborate framework which is suggested to take into account various aspects right from the selection of the target to managing the risk after the merger or acquisition has been formally done. Corporate governance and other issues arising as a result of the merger in the form of competition from rivals and behavioral issues of employees are also taken up. The various forms of mergers and acquisitions that are auctions, takeover and the defences adopted in the face of these are also mentioned.

Man, Ard-Pieter de. and Duysters, Geert. (2005)[44], focused on the effect of innovative performance of the companies involved in various alliances. The y investigated the trends in strategic technology alliances and Mergers and Acquisitions (M&A's) which according to them was a strategic tool in keeping up with the rapidly changing technology despite the poor success rate of mergers. They found that the innovativeness of firms was propelled by alliance. However the analysis did not focus much on the quantitative aspect. The paper concentrates on the innovation aspect only which is an important factor but there are other critical aspects involved in Mergers and Acquisitions (M&A's) too which are overlooked here. **Bogetoft, Peter and Wang Dexiang (2005)**[45]in their study made an attempt to introduce simple production models for the purpose of estimating potential gains from mergers. For the purpose a model is developed and the gains are divided into technical efficiency, size and harmony. Different alternatives are undertaken for evaluating the same. Data Envelopment Analysis (DEA) is undertaken for estimating potential gains from mergers with the case study being focused on Denmark relating to merger of agricultural extension offices. The study finds that a merger might cause a unit to improve its performance on an individual basis and also affect its scale of operations, mix of inputs available and outputs demanded. This framework can be applied for keeping multiple input multiple output framework during the process of production and be used in areas such as environment regulation and be used to develop responses to them as well for developing a process in which the needs of different farms can be met through mergers.

Agarwal, Manish. and Singh, Harminder. (2006)[46] investigated in their paper the role of insider trading activity in Indian Capital Market based on private and non-public information prior to merger announcements. For the purpose a modified market model is used which is based on a sample of 42 Companies for which merger announcement date was during the period 1996-99. The authors recommend investigation in six Companies by relevant authority, i.e. SEBI regarding possible insider trading as it leads to inefficiency and distortion in the performance of capital markets. In the paper the stock price movements around merger movements are explored to investigate discrepancies but insider trading may not be the only reason for abnormal movement in stock quotes. Besides, insider trading is not a very big revelation in Indian market and even if it is detected it is extremely difficult to prove. **Mehta, Jay and Kakani, Ram. Gupta (2006)**[47] focused on concentration of banks into few larger banks and aimed to study the motives behind Mergers and Acquisitions (M&A's) in the Indian Banking Sector and compares it with the scenario in the international arena. They recognized that the environment has a major role to play in Mergers and Acquisitions (M&A's). The major motives for M&A's are cited as stability, return and risks to shareholders, CAR norms and other regulatory framework, management of bankruptcy risks and growth. Also M&A's are used as a tool and opportunity for development. A study of cross-border Mergers and Acquisitions (M&A's) in banks is also made. They concluded that ease in regulatory framework and the existing poor infrastructure are the major reason for the increased consolidation in the banking sector. The paper discusses the motivations that lead to Mergers and Acquisitions (M&A's) but does not evaluate or analyze, whether the motivation actually yields synergistic results and profits. **Breinlich, Holger. (2006)**[48] explored the growing importance and increase of M&A's in the wake of liberalization for the purpose of industrial restructuring where resources are transferred from less to more productive firms and in the bargain the quantitative magnitude of overall transfers significantly increase. An attempt is made in this study to investigate; whether CUFTA increased M&A activity, resources are actually transferred from less to more productive firms in M&A activity, investigate amount of inter-firms transfer of output and employment in North America due to M&A where sample period is 1985-1988. Results of the research show that M&A are important alternatives to the adjustment mechanism of firm and establishment closure and contract contractions as emphasized in earlier studies. Also M&A activity show stronger inter-industry variation and is negatively related to initial tariff levels. CUFTA based in 1989 is taken as a basis which is about two decades back. Also the characteristics of CUFTA may not apply in other cases.

Spearot, Allen (2007)[49], studied a model of domestic and foreign Mergers and Acquisitions (M&A's) with heterogeneous firms in relation to a closed economy and shows that aggregate productivity in acquisition is positively influenced by the transfer of capital from the least efficient to higher efficient firms for the purpose of which a non-parametric test is undertaken. The study is extended to open market economy models as well. The Researcher concludes that tariff choice of domestic and foreign government should be expected to influence firm decision both within and outside border. The theoretical relationship between trade policy choice of outsiders and composition of investment in New Zealand is not collaborated by empirical evidence. **Pradhan, Jaya. Prakash. (2007)**[50] studied the recent wave of rising overseas acquisitions by Indian Multinationals and also the associated trends and location determinants. The recent trend affirms the use of Mergers and Acquisitions (M&A's) as a popular tool for structuring overseas investments as a response to the growing globalization of world economies and the corresponding liberalization of Indian economies. The positive micro and macro-economic indicators further assisted in pushing the overseas acquisitions of Indian firms. The manufacturing sector leads the number of acquisitions at 47.5percent followed closely by services at 44.9percent. Indian firms generally target developed countries for acquisition. The motives range from market access to benefits from operational synergies and also exploiting advantages that are not present in the home market. The empirical analysis also focuses on the motivational aspects where it is found that Indian firms tend to concentrate in markets where skilled manpower is abundant and imports from India are of a significant proportion. The study does not explore much the benefits, value, synergy or the profitability of the concerns that are involved in such overseas acquisitions which is a critical aspect to evaluate the viability of the Mergers and Acquisitions (M&A's) that are being undertaken at a brisk pace. **Devos, Erik et al (2008)**[51] explored the gap in Mergers and Acquisitions (M&A's) studies by analysing the importance of various sources that cause a gain in mergers. The paper contradicts previous findings that synergies are created due to taxes, market power or improvement in the performance or efficiencies. For the purpose Value Line Forecast of cash flows is of 264 large mergers is made relating to acquiring, target and combined firms. Merger synergies is calculated and the average gains from the mergers are calculated which come out to be 10.03percent. According to the study that in case of mergers 1.64percent is contributed by tax saving and operating synergy provide for the remaining 8.38percent as regards additional value. The Researchers suggest that these gains in mergers are more importantly dependent on resource allocation as compared to tax planning and increased market power. The study however relies on cash flow and does not take into consideration other qualitative aspects that culture and technical know-how. Besides the resource allocation, the utilization of resources is also an important aspect.

Foster, Stanley Reed et. al. (2007)[52]in their book dealt with the concept and various issue related to Mergers and Acquisitions (M&A's). The basic terms related to mergers are described followed by the process related to the same. It deals with the selection of the target company and the legal framework and also the issues of valuation and pricing in detail. Various sources for financing and the procedures to be followed for finalizing the deal are discussed at length. The integration efforts to be employed after the merger with relevant examples are discussed. Various case studies and legal aspects are discussed to throw light on the practical implications.

Gaughan, Patrick (2007)[53] in his book gave an elaborate description of various issue related to mergers relating to the types, valuation, financing, objectives etc. A brief overview of the history related to mergers is followed by the legal framework and merger related strategies. A section is also devoted to various aspects of hostile takeover relating to the measures and tactics employed for the same. The various aspects of corporate restructuring are described in detail followed by bankruptcy situations with special reference to USA. For the purpose pf structuring a deal valuation of the target company is vital. The author deals various methods of valuation and also the tax related issues. **Galpin, Timothy J. And Herndon, Mark (2007)**[54] in their book provide detailed guide lines for bringing affecting a successful merger or acquisition deal. The motives behind structuring a deal are discussed followed by the various steps which the authors suggest are necessary for a successful deal. They stress on diligence and enterprising management. Various models are suggested for organizing and coordinating the deal. The management has to integrate the employees and garner their cooperation for making the deal a success for which effective communication is suggested. Special focus is given to cultural integration and addressing problems that are faced in implementing a deal. Various case studies are also taken up for the same.

Mantravadi, Pramod. And Reddy, A. Vidyadhar (2008)[55] analyzed the impact of mergers on operating performance of acquiring corporate in different industries based on pre-merger and post-merger financial ratios with samples involving public limited and traded companies in India between 1991 and 2003. The results suggest that there are minor variations in terms of operating performance following the mergers. However differential impact is noticed, that is the type of industry has an impact on the post-merger performance. A period of 3 years before and after the merger is taken to assess the impact of merger which is not appropriate as the affect of the merger is not visible in the short-period. The sample size undertaken is small to generalize the results. Also the study has ignored the impact of differences in accounting methods of different firms. **Nayyar, Deepak (2008)** [56] did a study on the rapid expansion of foreign direct investment and overseas acquisition from India in the past decade. Liberalization measures provided the impetus but it was the capacity and ability of Indian firms which mainly facilitated the FDI flows and acquisitions. The expansion of FDI from India has been attributed to the growing Mergers and Acquisitions (M&A's) abroad. The share of India in total purchases by developing countries, reported as cross-border mergers and acquisitions, was 3.2percent but the determinants of FDI fail to shed light on the recent surge in overseas Mergers and Acquisitions (M&A's) which are mainly in the manufacturing sector. However, the economic implications relating to internationalization of firms at micro and macro levels are not explored deeply in this paper. **Margsiri, Worawat. et al. (2008)**[57] explores internal investment and acquisition as modes for growth where the former consumes considerable time and the latter provides instant cash flow. In their research paper the authors aimed to investigate the relationship between pre-merger announcement price run-up and negative announcement returns with the integration cost and synergies resulting from the acquisition. The Researchers believe that internal investment is a fall back strategy in case negotiations for investments fail which would affect both the decision to acquire as well as the acquisition price. It is also seen that acquisitions with low level of synergies or relatively high integration costs do not maximize the social surpluses. The Researchers find that there are negative stock reactions in case of acquisitions initiated by buyer while in case of seller it leads to negative stock movement when seller has significant bargaining power. The paper mainly concentrates on movement of stock prices and the more vital concept of synergy and value creation is overlooked.

Wang, Cong and Xie, Fei (2008)[58] explored the benefits that arise from change in control as a result of Mergers and Acquisitions (M&A's). According to the paper in cases where the acquirer is dominant than the target in terms of shareholders rights, it would benefit the resultant corporate governance at the target and the reverse case would be present in case where the target shareholders rights are stronger. For the purpose 396 acquisitions by US firms between 1990 and 2004 are undertaken and the results indicate that they support the assumption above, where stronger the acquirer shareholders rights as compared to that of the target, higher would be the synergy created. It is found that stock market anticipates the efficiency gains to be realized and reacts to Mergers and Acquisitions (M&A's) announcements accordingly. The managerial capability and ignorance is ignored. In the paper the shareholders rights is considered as a basis for determining managerial control but it cannot be treated as the only ground. Also the entire focus is on the control at the target immediately after the merger but in reality the efficiency of the managerial control should be evaluated on the basis of the synergy and performance after the merger has been structured.

Steigner, Tanja (2008)[59] in his thesis analyzed with the return of bidder companies in USA in regards to cross border Mergers and Acquisitions (M&A's). According to the study the cultural aspect is a cause of concern for the shareholders initially but later the bidder firms get positive benefit from the exchange of technical expertise. A hypotheses study is made to explain abnormal bidder firms returns by making a comparison of first mover hypotheses to late mover hypotheses in cross border Mergers and Acquisitions (M&A's). The findings suggest that these acquisitions do not create value for the strategic pioneers unless the cultural distance between USA and the target country is large and when the cultural distance is small it leads to positive effect for the followers. **Chaufla, Sandeep (2008)**[60] in his paper provide an insight into the regulatory environment in India with regards to the investment climate relating to the tax aspects. India is an attractive investment decision mainly due to the growing economy, robust GDP, unutilised resources, skilled manpower and a well-developed regulatory environment. Post-liberalisation FDI rules have been relaxed where up to 100percent FDI is allowed in most sectors. The paper further provides the various forms of ownership structure that can be used in India. Provisions under Company Act 1956, FEMA 1999 and Income Tax Act 1961 etc. are studied to provide a synoptic view of the regulatory environment. The paper provides a synoptic and theoretical view of the regulatory environment. However the paper ignores the practical aspects relating tom application and overlooks the present environment relating to the market conditions etc.

Hunt, Peter A. (2009)[61] in his book provided a guide to creating shareholders value. He dealt intricately with aspects related to shareholders value and the valuation and financial analysis of mergers and acquisitions. It deals with the various parameters that are required to be studied for the purpose of analysis of financial statement and cash flows. It also suggests undertaking comparisons between companies and transactions for studying the viability of the deal structured. Various methods to analyse the merger, leveraged buyout and stock price are mentioned. For the purpose of studying the practical implications of mergers and acquisitions case studies are undertaken. Other forms of deal like divestitures, sale of assets, joint ventures etc are also discussed. It is followed by aspects related to corporate restructuring and recapitalization. The legal framework surrounding the merger acquisition deals and the anti-takeover measures are also elaborately dealt with. Methods and strategies for finalizing a deal are discussed further along with the suggestions for effecting a post-merger integration.

DePamphilis, Donald (2010)[62] in his book gave a detailed description of various concepts related to mergers and acquisitions and its impact on various parties who are affected by it along with few case studies. The laws and regulations as applicable to mergers and acquisitions in USA are also dealt with elaborately. It is followed by extensive review of the process of mergers and acquisitions. A detailed study of the acquisition of Merill Lynch by Bank of America is provided along with merger and acquisition valuation and modelling. Various modes of valuations are discussed elaborately along with the analysis of the Privately Held Companies. Cross border mergers and acquisitions are analyzed along with various alternative ways of restructuring and expanding. The author has discussed the various issues related to mergers and acquisitions in the light of various relevant case studies.

5.4 Research Gap

Review of literature done above sheds light on various gaps in the previous researches carried out in this field. The Researcher intends to put in an honest effort to provide her sincere contribution in this regard.

It is seen that in most works, it is the trends, policies; framework and requisites are investigated while the profitability and financial analysis of the mergers are not given due importance as was done in the case of **Kang, N and S. Johansson (2000)**[63] **and V, Harsh H. and Srividya, C.G. (2004)**[64]. Also it is observed that the assumptions about characteristics of the firm, market condition, regulatory framework etc. might not apply in all cases. As is seen in the case of **Breinlich, Holger. (2006)**[65] the provisions of CUFTA do not apply in all Mergers and Acquisitions (M&A's). Some studies highlight the problem as in the case of **Agrawal, Anup. et al. (1992)**[66] which reports that shareholders of acquiring firms suffer 10percent loss as result of merger but appropriate measures to make the merger profitable are not dealt with. While some studies mention the theoretical implications of Mergers and Acquisitions (M&A's) they do not look into the practical application of it as is seen in the case of **Perry, Jeffery S. and Herd, Thomas J. (2004)**[67] and **Lee, Kyungmook. and Pennings, Johannes M. (1996)**[68].

However the major limitation is seen that in most of the studies, post-merger analysis, i.e. analyzing how the merged or resultant company performs financially after the merger is not done which is extremely important to study the viability and success of the Mergers and Acquisitions (M&A's) as is seen in **Vithala, R. Rao. (1991)**[69], **Jemison, David B. and Sitkin, Sim B (1986)**[70], **Ghosh, Aloke and Lee, Chi-Wen Jevons (2000)**[71], **Kumar, Nagesh. (2000)**[72], **Lall, Sanjay (2002)**[73] and **Lyons, Bruce. R (2001)**[74].

Some studies cannot be generalized as the sample size taken is very small as in **Shick, Richard A. (1972)**[75] while some works suffer from statistical limitations as in **Slusky, Alexander R. and Caves, Richard E. (1991)**[76] and **Shughart II, William F. and Tollison, Robert D (1984)**[77].

The Researcher has made an effort to address these research gaps and has made an attempt to make a complete and conclusive study on Mergers and Acquisitions (M&A's) .The research related to Mergers and Acquisitions (M&A's) in different countries is compiled, analyzed and reviewed in order to develop an understanding about the topic and also understand the work that has been carried out in this area. It is found that Mergers and Acquisitions (M&A's) is of late becoming a potent tool in the hands of the Indian corporate. It is found that though lot of studies have been done on this topic the merger mania in the last few years is creating waves all over the world and the thesis has been so designed so as to evaluate the latest Mergers and Acquisitions (M&A's) involving Indian corporate in the Indian Steel Industry which is having a huge international presence.

5.5 Conclusion

The critical review of literature gives a wide understanding related to the previous research work on the topic of Mergers and Acquisitions (M&A's). The research work to be carried out is designed on the basis of previous work, present data and future prospects along with innovative methods and ideas. The research gap is traced and the work that the Researcher intends to do in this thesis is proposed. Having reviewed the available literature on Mergers and Acquisitions (M&A's) the Researcher moves on to develop a research design and methodology in the next chapter for the thesis.

5.6 References

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Chapter 6

Research Design and Methodology

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Research Design and Methodology

6.1 Introduction:

The previous chapter reviews a wide amount of literature on Mergers and Acquisitions (M&A's) in both the domestic and international arena. It reviews various studies entailing diversified aspects of mergers and acquisitions in various sectors. It traces the research gap in the studies reviewed and proposes research work to be undertaken for the thesis.

This chapter highlights the scope and objectives of the study and also the research design and methodology employed by the Researcher in the study. All the statistical and accounting tools that are used to measure the impact of the merger are discussed elaborately here.

6.2 Scope of the Study

In the year 1991 the economic boundaries of India were opened due to which the investment climate in India underwent sweeping changes. The economic and corporate scene in India is discussed at length in order to investigate the past and present scenario of Mergers and Acquisitions (M&A's). A realistic attempt is made to make a prediction about the future of the ongoing drive of Mergers and Acquisitions (M&A's) on the basis of trends and reports.

The study encompasses mergers and acquisitions taking place in various sectors worldwide. An attempt has been made to cover all relevant mergers which have taken in various important sectors both in the domestic and international scene. Also the various issues relating to mergers and acquisitions are being investigated in detail. A separate section is devoted to study the impact of Mergers and Acquisitions (M&A's) in the Steel sector predominantly.

The study forays into the Financial Analysis of Mergers and Acquisitions (M&A's) to study the synergies and values that are created as a result of the merger. Various measures are employed for that purpose to discuss the financial and operating performance of the entities involved before and after the merger. The main idea is to assess the impact of the merger in terms of performance of the companies and find out if the effect has been positive or negative.

6.3 Objectives of the Study

The main objectives this thesis deals with are enlisted as below:

i. Study the major Mergers and Acquisitions (M&A's) deals that have taken place globally and in India. Analysis of success of Mergers and Acquisitions (M&A's) as a tool of investment, expansion and growth.

ii. Sector-wise study of global and domestic Mergers and Acquisitions (M&A's) in terms of value of deals.

iii. Study the growth and development of Indian Steel Sector since 1991 and evaluate its financial performance in the last few years.

iv. Examine the Pre and Post merger financial reports to examine whether the Mergers and Acquisitions (M&A's) led to a profitable situation for the merging and the merged firms. For the purpose various accounting and statistical measures are used.

v. Investigate the reaction of the market to Mergers and Acquisitions (M&A's) by making a comparison of the movement of Market Price per Share (MPS) and Earning per Share (EPS) both before and after the deal.

vi. Analyze the relation between the movement of the Profitability and MPS before and after the merger to explore the reaction of the investors to a merger announcement.

vii. Calculate the effect of merger on financial and operating performance before and after the merger.

viii. Detailed introspection of the motives and success rate of major Mergers and Acquisitions (M&A's) deals that have taken place in the Steel Sector as a part of corporate structuring both globally and at the domestic level. In the thesis a detailed introspection is made of the same to analyze the motives and success of these Mergers and Acquisitions (M&A's).

6.4 Hypotheses of the Study

1. **Testing the relationship between Pre and Post Merger Profitability**

   H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger Profitability

   H_α (Alternative Hypothesis) = There is a relation between the Pre and Post-merger Profitability

2. **Testing the relationship between Pre and Post Merger Capital Employed Turnover Ratio (CETR) or Fixed Asset Turnover Ratio (FATR)**

   H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger CETR or FATR

   H_α (Alternative Hypothesis) = There is a relation between the Pre and Post-merger CETR or FATR

3. **Testing the relationship between Pre and Post Merger Interest Coverage Ratio (ICR)**

   H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger ICR

   H_α (Alternative Hypothesis) = There is a relation between the Pre and Post-merger ICR

4. **Testing the relationship between Pre Merger Profitability and Pre Merger Market Price per Share (MPS)**

   H_0 (Null Hypothesis) = There is no relation between the Pre-merger Profitability and MPS

   H_α (Alternative Hypothesis) = There is a relation between the Pre-merger Profitability and MPS

5. **Testing the relationship between Post Merger Profitability and Market Price per Share (MPS)**

   H_0 (Null Hypothesis) = There is no relation between the Post-merger Profitability and MPS

   H_α (Alternative Hypothesis) = There is a relation between the Post-merger Profitability and MPS

6. **Testing the relation between Pre Merger Market Price per Share (MPS) and Post Merger Market Price per Share (MPS)**

   H_0 (Null Hypothesis) = There is no relation between the Pre Merger MPS and Post-merger MPS

   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger MPS and Post-merger MPS

7. **Testing the relationship between Pre Merger Earnings per Share (EPS) and Post Merger Earnings per Share (EPS)**

   H_0 (Null Hypothesis) = There is no relation between the Pre Merger EPS and Post-merger EPS

   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger EPS and Post-merger EPS

8. **Testing the relationship between the Pre and Post Merger Profit Margin**

   H_0 (Null Hypothesis) = There is no effect of Merger on the Pre Merger and Post-merger Profit Margin

   H_α (Alternative Hypothesis) = There is an effect of Merger on the Pre Merger and Post-merger Profit Margin

9. **Testing the relationship between the Pre and Post Merger Profit Rate**

   H_0 (Null Hypothesis) = = There is no effect of Merger on the Pre Merger and Post-merger Profit Rate

   H_α (Alternative Hypothesis) = There is an effect of Merger on the Pre Merger and Post-merger Profit Rate

6.5 Research Design

The study is designed to study a wide range of International and Indian Companies that expand through Mergers and Acquisitions (M&A's). An attempt is made to collect data and use it for testing abnormal returns around the announcement of a Mergers and Acquisitions (M&A's). The Researcher studies the financial profile of the merging and the merged company both before and after the merger and applies various financial and accounting tools to evaluate the effect of the merger on the financial and operating performance of the undertakings involved. The financial data of the acquiring company before and after the merger is collected. These are organized in the form of Comparative Statements and Ratio Analysis. The data for Pre and Post Merger is analysed separately and then relevant statistical tools are used to test the effect of the merger on the financial and operating performance of the entities involved.

6.5.1 Instruments of Data Collection

Relevant literature and other research material were extensively analysed for the purpose of the study to develop know how about the various aspects related to the topic. Various libraries and databases maintained were studied in order to collect the secondary data. Online databases of various agencies and universities were also accessed for the purpose of data collection which helped in the formulation of the Research Design.

Major thrust of the study is based on secondary data which has been gathered from available published records in Annual Reports of Companies, Newsletters, Reports, Surveys, Websites, and Proclamations etc. Data has been collected from the Securities and Exchange Board of India (SEBI) which currently is maintaining database on tender offers relating to the companies registered on Indian Stock Exchanges. Market prices of shares and other relevant information about the stocks of companies has been collected from the database of Companies maintained by various Stock Exchanges, i.e. NSE, BSE, NYSE, Singapore Stock Exchange, London Stock Exchange, etc. Data has also been collected from Centre for Monitoring Indian Economy (CMIE) which has been publishing data on Mergers and Acquisitions (M&A's) since January 1997. Relevant data related to Steel Industry in India has been accesses from the database maintained by the Ministry of Steel, Government of India. Data was also collected through World Investment Reports, UNCTAD, Grant Thornton Reports, AT Kearney Reports, PricewaterhouseCoopers Reports, RBI Monthly Bulletin, Economic Surveys, Handbook of Statistics, Mergermarket Report, Budgets and other relevant sources.

6.5.2Data Compilation and Tabulation

After collecting the data from various published resources the data was verified against alternate data bases to be assured about the accuracy and reliability of the data. It was compiled and tabulated by using various software programs as well as manually for the purpose of interpretation and analysis. The information so interpreted was then used for analysing the financial viability of the deals undertaken

6.5.3 Presentation Instruments

The data collected would be analysed and presented using tables, schedules, pie charts, bar diagrams and graphs etc.

6.6 <u>Research Methodology</u>

For the purpose of analyzing the profitability of Mergers and Acquisitions (M&A's) various accounting and financial measures are undertaken.

The sales and cost of sales of the company to be analysed for few years before and after the merger or acquisition are undertaken. Annual percentage changes are computed to investigate the financial performance in terms of annual percentage changes in the figures. The movement in the figures around the announcement of the merger or acquisition is studied in detail.

Financial ratios are also calculated to analyze the profitability, capital structure, liquidity, productivity and solvency of the concern. These ratios are calculated for several years before and after the merger and the changes in them for each year are reported.

Various Hypotheses are formulated to find if there is an effect of Mergers and Acquisitions (M&A's) on Profitability, Fixed Assets Turnover Ratio (FATR), Capital Employed Turnover Ratio (CETR), Interest Coverage Ratio (ICR), Earnings per Share (EPS) and Market Price per Share (MPS). For the purpose of analysis Correlation Coefficient (r), Coefficient of Determination (r^2), Regression Analysis and Student-T test are undertaken.

Also Profit Rate and Profit Margins before and after the merger or acquisition are calculated for the concerned firms in order to find the impact of the merger on the financial and operating performance.

6.7 *Statistical Tools and Techniques Used*

i. **Correlation Coefficient (r):** In cases where relationship between two or more variables is to be analyzed correlation coefficient (r) is used. It helps in determining the direction and degree of relationship while the cause and effect cannot be found by this technique. The degree of relationship depends on the value of (r) found which is explained below

Table 6.7.1: Determining the Degree of Correlation

Degree	Positive	Negative
1. Perfect	+1	-1
2. Limited		
a. Very High	Above +.9 and up to +.99	Above -.9 and up to -.99
b. High	Above +.75 and up to +.9	Above -.75 and up to -.9
c. Moderate	Above +.25 and up to +.75	Above -.25 and up to -.75
d. Low	Above 0 and up to +.25	Above 0 and up to -.25
3. Absence	0	0

Source: Gupta, K.L (2004) "Business Statistics" 6th Edition, Agra, Navyug Sahitya Sadan.

However the existence of correlation does not always imply that there is a causation effect or a functional relationship but implies just an existence of covariance.
For the purpose Karl Pearson's correlation coefficient[1] (r) is calculated which is calculated as below:

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \times y^2}}$$

Where

$x = (X - \overline{X})$ and $y = (Y - \overline{Y})$

$\overline{X}$ = Mean of Series X

$\overline{Y}$ = Mean of Series Y

i. Coefficient of Determination (r^2)

After having calculated the correlation coefficient (r) we can find out the coefficient of determination (r^2) by squaring the value of correlation coefficient (r). It explains the percentage variation in the dependent variable Y which can be expressed in the terms of the independent variable X. This helps in ascertaining the Coefficient of Determination.[2]

ii. Regression Analysis

Once the degree and direction of the relation is found out we move on to formulate the regression equations. It helps us to establish the cause and effect relationship between the two variables that is estimating the value of one variable if we have the value of another. Correlation Coefficient (r) provided us with just the degree and direction while the regression analysis attempts to estimate the value of one variable if the value of the other variable is given. It helps us to find out how many units movement will result in the dependent variable as a result of a unit movement in the independent variable. The Researcher has used *linear regression analysis* and has formulated regression lines for the purpose.

The regression line formulated for the purpose is

$Y = a + bX$

Where;

Y = Dependent variable

a = intercept

b = Slope

X= Independent variable

For the purpose of formulating the equation the value of the two numerical constant a and b are required to be computed which is done through the following formulae[3].

$$Y - \overline{Y} = r \frac{\delta x}{\delta y} (X - \overline{X})$$

Where

Y= value of Y variable to be predicted

$\overline{Y}$ = Arithmetic mean of Y Series

r = correlation coefficient

δx= standard deviation of X series

δy= standard deviation of Y series

X= value of X variable correponding to which the value of Y variable is to be calculated

$\overline{X}$ = Arithmetic Mean of X series

In place of $r \frac{\delta x}{\delta y}$ when actual mean is taken then $\frac{\sum dxdy}{\sum d^2y}$ can be used

dx = deviation from series X

dy = deviation from series Y

iii. Testing of Hypothesis[4]

Testing of Hypothesis means formulation of an assumption about the population from which the sample is drawn and then test to find whether the formulated hypothesis is true or not. For the purpose of Hypothesis testing first of all a hypothesis is formed. A sample is collected and then it is tested whether the hypothetical value and the actual value are the same. In the study nine hypotheses have been formulated and brief descriptions of all have been provided.

iv. Null Hypothesis and Alternative Hypothesis[5].

The usual approach is to formulate two hypotheses that is the Null Hypothesis and Alternative Hypothesis.

a) Null Hypothesis (H_0) assumes that there is no statistically significant relationship between the sample and the population for the matter under consideration

b) Alternative Hypothesis (H_α) assumes that there is a statistically significant relationship between the sample and the population for the matter under consideration.

v. Level of Significance[6]

After that a level of significance is required to be set up and is expressed in percentage. It is basically the probability of rejecting the Null Hypothesis when it is true. The Researcher has tested the level of significance for 5percent level. It means that the probability that an error is being committed is 5 in 100.

vi. Student t-test[7]

The t-test is applied when the size of the sample is less than 30 and is derived mathematically under the assumption of normal population.

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S} * \frac{\sqrt{n_1 n_2}}{\sqrt{n_1 + n_2}}$$

$\bar{X}_1$ =Mean of first sample
$\bar{X}_2$=Mean of second sample
n_1 = number of observations in first sample
n_2 = number of observations in second sample
S= Combined Standard Deviation

$$S= \frac{\sqrt{\sum(X_1-\bar{X}_1)^2 + \sum(X_2-\bar{X}_2)}}{\sqrt{n_1+n_2-2}}$$

The degree of freedom (v) is calculated as $n_1 + n_2 - 2$. Once the degree of freedom is found the table values for 5percent level of significance is found. If the calculated value of t is greater than the value of t at 5percent level of significance ($t_{0.05}$), the Null Hypothesis is rejected and the Alternative Hypothesis is accepted. Alternately if the calculated value is less than the table value of t at 5percent level of significance ($t_{0.05}$) then the Null Hypothesis is accepted and the Alternative Hypothesis is rejected.

6.8 Sample Size and Period of Study

For the purpose of the study major steel producers of India have been taken and the major deals affected by then have been scrutinized. The study takes up the major Mergers and Acquisitions (M&A's) deals which have taken place in the private and public sector. In Chapter 8 five significant domestic deals are studied while Chapter 9 takes up three major cross border deals in the steel sector.

The major deals that have taken place in the steel sector since 1991 to 2009 have been taken up in brief in Chapter 7. The deals to be analyzed have been taken randomly over the period 1991 to 2009. The financial profiles of the companies involved have been scrutinized minutely before and after the merger in order to study the impact of the merger or acquisition on the performance of both the merged and merging entity both before and after the merger.

6.9 Brief Description of Samples (Deals) Undertaken:

For the purpose of study nine major Mergers and Acquisitions (M&A's) involving Indian Steel producers are undertaken. Five domestic deals and four cross border deals are taken up. A brief description of the deal and the companies involved is provided below.

I. Domestic Mergers and Acquisitions (M&A's)

i. **Merger between SAIL (Steel Authority of India Limited) and Visvesvaraya Iron and Steel Limited**: The merger between SAIL and its subsidiary Visvesvaraya Iron and Steel Limited was carried out in1998-99

a. SAIL which is a public sector undertaking is one of the largest producers of steel in India and has five integrated steel plants in different parts of the country. It is owned and operated by the Government of India and is among the top five profit earning corporate of the country.

b. **Visvesvaraya Iron and Steel Limited** which is located in Bhadravati and is involved in the production of alloy steel and pig iron. It was taken over as a subsidiary of SAIL in 1989. It was running into heavy losses and subsequently merged with SAIL in 1998-99.

ii. **Merger between SAIL (Steel Authority of India Limited) and IISCO (Indian Iron and Steel Company):** With the wave of consolidation sweeping the Steel industry SAIL also joined the mania and merged it's another loss making subsidiary and further enhanced its operating capacity.

a) **SAIL** is one of the fastest growing public sector units in India and the merger with SAIL provided it with an impetus in production capabilities while it is engaged in huge modernization and expansion programs for its plants.

b) **IISCO** Steel plant is located at Burnpur near Asansol and was the second integrated steel plant to be set up in India after Tata Iron and Steel Company (TISCO). It was taken over by the Government in 1972 and later nationalized and made a subsidiary of SAIL. It was merged with SAIL in 2005-06.

iii. **Merger between Indian Metals and Ferro Alloys (IMFA) and India Charge Chrome Limited (ICCL):** IMFA merged its subsidiary ICCR with itself in 2006 with a view to consolidate its operations and financials in 2006. The merger made IMFA the largest fully integrated producer of Ferro alloys in the country.

a) **IMFA** is based in the eastern state of Orissa was set up in 1962 and is India's largest producer of Ferro alloys.

b) **ICCL** was set up in 1982 at Bhubaneswar in Orissa and was a subsidiary of IMFA till it was merged with its parent company in 2006.

iv. **Takeover by Pittsburgh Iron and Steel Limited of Bellary Steels and Alloys Limited:** Pittsburgh Iron and Steel Limited entered in to the manufacturing and trading of steel through its merger with Bellary steel in 2006.

a) **Pittsburgh Iron and Steel Limited:** SandY Mills which was formed in 1964 discontinues its business in textile and ventured into steel with the acquisition of Bellary Steel in 2006.

b) **Bellary Steel and Alloys Limited:** Bellary Steel and Alloys Limited is situated in Bellary and was incorporated on 17 May 1984 in Karnataka. It mainly deals with the manufacturing and marketing of reinforcement bars and carbon and alloy steel rounds.

v. **Takeover by JSW Steel of Southern Iron and Steel Company Limited (SISCOL):** JSW took over SISCOL in 2007 in a deal where 1 share of Jindal was exchanged for 22 shares of SISCOL

a) **JSW Steel**: JSW Steel has carved out a niche for itself and is one of the fastest growing enterprises in India. It is a part of the $8 billion O.P Jindal Group.

b) **SISCOL**: The Company was incorporated as a public company in 1991 and was merged with JSW Steel in 2007.

II. Cross border Mergers and Acquisitions (M&A's)

i. **Takeover by Tata Steel of NatSteel:** Tata Steel acquired the Singapore based NatSteel for a deal valued at US$ 468.1million in 2005 as part of its strategy to be a world class facility in terms of steel. In the process it got access to new technology and access to new market.

   a. **Tata Steel** was established in Jamshedpur in 1907. Tata steel has grown to be the world's sixth largest steel producer which has operations in more than 20 countries.

   b. **NatSteel** is based in Singapore and is one of the largest player in steel in the Asia-pacific region and has operations in seven countries

ii. **Takeover of Corus by Tata Steel:** After hectic lobbying and rival bidding Tata Steel was finally able to carve out a deal where it took over Corus for US$ 12.04 billion which was the largest ever by an Indian company.

   a. **Tata Steel** has now a huge global presence with operations in more than 20 countries and commercial presence in 50. Its recent spate of Mergers and Acquisitions (M&A's) has further consolidated its position as a major steel group.

b. **Corus** was formed as a result of the merger between British Steel and Koninklijke Hoogovens. It is the largest producer of steel in Europe and had operations in UK and Europe.

iii. **Takeover by Essar Steel of Algoma Steel:** Essar Steel took over Canada's Algoma Steel for 1.85 billion Canadian dollars in 2007 which was expected to give access to Essar Steel to the market in North America

a. **Essar Steel** is a major producer of steel in the world and has got operations in Canada, USA and Asia. It is India's largest exporter of flat steel products.

b. **Algoma Steel** established in 1901 is based in Ontario in Canada and mainly deals in rolled steel products. It was acquired in 2007 by Essar steel and was renamed as Essar Steel Algoma Inc.

6.10 Comparative Analysis, Ratio Analysis, Profit Rate and Profit Margin

i. Comparative Analysis:

Annual Percentage changes for sales and cost of sales is calculated to find out the percentage variations. The percentage variation around the announcement of the merger helps in analyzing the effect of the merger or acquisition. Also the percentages have been calculated elsewhere for Profit Rate and Profit margin for the purpose of comparative analysis and calculating the impact of the merger on the movement of figures on the financial and operating efficiencies of the concerns involved.

ii. Ratio Analysis[8]

a. Ratios Used

1. **Debt Equity Ratio (DER)**= $\frac{\text{Long term Debt}}{\text{Shareholders' Equity}}$

Shareholders Equity = Equity Shareholders fund + Reserves and Surpluses

2. **Current Ratio (CR)** = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$

3. **Capital Employed Turnover Ratio (CETR)** = $\frac{\text{Sales}}{\text{Capital Employed}}$.

4. **Fixed Asset Turnover Ratio (FATR)** = $\frac{\text{Sales}}{\text{Fixed Assets}}$.

5. **Interest Coverage Ratio (ICR)** = $\frac{\text{Earnings before Interest and Tax (EBIT)}}{\text{Interest Expenses}}$

6. **Profitability (percent)** = $\frac{\text{Profit after Tax}}{\text{Sales}} * 100$

b. Statistical Implications of Ratio Analysis

The ratios which are calculated are divided into two sections that are Pre Merger and Post Merger Ratio Analysis. The Researcher then applies statistical tests on them to tests the impact of the merger on these ratios. The correlation coefficient (r) is calculated to find out the degree and direction of relationship between the pre and post merger ratios. Coefficient of determination (r^2) is then calculated to explain the percentage of variance which is explained by the known variable. It is followed by Regression Analysis where equations are formed to find out the cause and effect relationship between the tested variables. Finally student-test is undertaken to test the statistical significance of the relationship. It is tested at 5percent level of significance.

iii. Profit Rate and Profit Margin[9]

a. **Profit Margin** = $\frac{\textbf{Profit after Tax (PAT)}}{\textbf{Net Sales (NS)}}$.

b. **Profit Rate** = $\frac{\textbf{Profit after Tax (PAT)}}{\textbf{Total Assets (TA)}}$.

The Profit Margin and Profit Rate are calculated for each year and then a pre merger and post merger average for each company analysed is carried out in order to ascertain the impact of the merger on the financial and operating performance. The Profit Margin gives an idea of the financial efficiency while the Profit Rate gives information about the operating efficiency. The percentage change after the merger or acquisition in each of the two is then calculated to assess its impact on them.

6.11 Importance and Utility of the Study

There have been fundamental changes in the world economy which has greatly changed the economic set up of economies worldwide. The period after 1990's saw Mergers and Acquisitions (M&A's) rise by six fold during 1990-98 with an increasing tendency towards very large scale unions (**Kang, N and S. Johansson (2000)**[10]). Countries like USA which had abundant financial capital and state of art technology took keener interest in carving out Mergers and Acquisitions (M&A's) to extend and capture newer markets. While in some cases Mergers and Acquisitions (M&A's) was the only alternative to survive the global onslaught and competition. It was a strategy for survival. Changes in government policies and legal framework which have made the legal and economic boundaries more transparent and also the opening and shrinking of economic boundaries is one of other major motivation for the upward surge in Mergers and Acquisitions (M&A's).

In the last decade mergers and acquisitions have been a worldwide phenomenon. Increasing mergers are taking place not only in the USA but all over the world.

The need of mergers and acquisitions in the global economy can be justified through the following points:

a) Synergies created by Mergers and Acquisitions (M&A's)

The primary reason cited for fostering mergers and acquisitions is creation for synergy. Literally speaking synergy refers to a process where combined worth of two identities is more than the sum of their individual worth (i.e. 2+2=5). In other words synergistic operating economies are created which are expected to arise from the combination of two separate identities and create mutual benefit as the outcome or output is expected to increase more than proportionately. The joint entity is expected to create more shareholder value than it would have been created individually.

While acquiring a firm different models of valuation are used. However, the acquiring firm generally pays a price which is more than the pre-merger valuation. The premium paid is attributed to the synergistic forces which are expected to be created after the merger. The buyer effects the merger in the hope that he would be able to benefit from the synergies that would be created after the merger.

For the seller the synergy represents the future prospects of their concern. The given equation helps to calculate the synergy and evaluate the financial sense of the deal:[11]

$$\frac{\text{Pre-merger value of both firms + Synergy}}{\text{Post- merger number of shares}} = \text{Pre-merger stock price}$$

The basic aim is to find out whether the buyer is benefited by the post-merger value of the firm or not. However the expected synergies do not take place often.

Synergies are classified in to various heads which are summarized below:

Operating Synergy: The concept of creation of operating synergy is related to creation of economies of scale and scope. A merger or acquisition may enhance both scale and scope. Acquiring a new facility may add to the available factors of production creating economies of scope through diversification where the available skills and resources are utilized to produce a related line of goods and services. Economies of scale may also be created by increasing the level of production. The fixed cost is distributed over a larger number of goods and services. The increased operations create synergies which are realized in the form of reduction of cost. However the anticipated synergies have to be evaluated against the cost to be incurred in bringing about the integration of facilities[12].

Financial Synergy: It refers to the integration of enterprises for the purpose of creating synergies or benefits in the financial aspect by entailing reduction in the cost of capital. This can be done for both the acquiring and the acquired firm as well. Financial synergy can be achieved by investing in unrelated business thereby reducing the associated systematic risk, increasing the size of the company or by creating an internal capital market[13]. However there is a school of thought that vehemently opposes the creation of financial synergies and says that it does not exist in efficient capital markets.

Managerial Synergy is also a form of synergy anticipated to be realized after the merger or acquisition is affected. A merger or acquisition also involves integration of the managerial acumen and each one's managerial efficiency might complement the other where specialization of one might used for the benefit for other and thereby create managerial synergies.

b) Easy and Quick Entry: Mergers are an easy growth strategy as entry to a new market is provided. Firms while expanding their operations do not have to start from scratch as they simply merge with a functional entity and get the benefits of synergistic operations as well. The cost and risk involved is also comparatively less as functional capabilities are already available. Also in case of territories where governmental restrictions exist in terms of setting up new businesses, merging opens the backdoor. An attempt of this sort has been made by Wal-Mart by merging with Bharti in India to enter in the retail sector of India[14].

c) Eliminating Competition and Dependence: Mergers and Acquisitions are an effective tool for meeting competition. A horizontal merger between firms dealing with the same business makes them complementary rather than as competitors. Both firms use each other's areas of specialization in arena of marketing, production, technology, infrastructure, etc. irrespective of the state of development. Elimination of competition proves to be a big booster. In an underdeveloped country, big firms merge and acquire smaller firms to attain monopoly as was done by the cola giants, Coca-cola and Pepsi in India. In a developed economy, competition is wiped out through these consolidation strategies.

A vertical merger or acquisition enables the merging firm to acquire a hold over its supply chain and establish a backward linkage. Also efficient control over the marketing channels and direct contact with customers can be established for forward linkage. An integrated unit is in a better position to control and monitor its supplies and resources making it more efficient.

d) Economies of Scale: A large number of resources are at the disposal of the merged entity and the bigger size enables it to benefit from economies of scale which accrue due to better utilization of resources and benefits available from all areas like, marketing, production, finance, human resource, technology, research and development etc.

Duplication of efforts are done away with and better utilization o resources lead to decreased cost and improved operational efficiency.

e) Diversification: Once a firm has established itself in a certain market, it looks for expanding its operations to other areas. In other words it looks for geographical and market diversification to benefit from its existing goodwill and market position. Merger is indeed one of the easiest ways to diversify, as in this case there is an understanding with an existing firm and the cost and formalities to start a new business can be done away with. The conglomerate undertaking that is created enhances the debt, financial, business, production, marketing capacity. Besides the risks are also diversified and the management of the acquired firm can provide necessary inputs for efficient operations.

f) Availing Tax Concessions: Another motivating factor for mergers and acquisitions is the tax concessions available by the government in this regard. Section 72A provides for the merger of a sick unit in to a profit making company which enables the latter to set-off its profits against the losses of the former which reduces its tax liability[15].

g) Benefits of Synergy: Synergistic benefits as mentioned above relates to the increase in output more than proportionately than the sum of inputs of individual firms and refers to better use of complementary resources.

h) Boon to Small Firms: Though small units enjoy various benefits and concessions from the government, there is always a desire to grow big. Besides in today's era of MNC's and other bigwigs it is becoming increasingly difficult for smaller units to compete and survive. Merger and acquisition is proving to be an efficient tool for these firms to sustain. These combine with other smaller firms or a bigger firm as they do not have the financial capability to expand alone. Also they benefit from technological expertise and also have to offer efficient management and other advantages to the acquiring or merging firms in turn.

i) Balanced Growth and Complementary Skill Sets: Mergers and acquisitions are a potent tool for fostering balanced growth. It is often seen that different entities have different areas of proficiency. For example there might be a firm having superior know-how regarding technology, while another may be specializing in marketing or production. If a merger is effected between these, all of them can benefit mutually from each other's capability and complementary skills.

j) Cross-selling: If two related enterprises merge they can benefit from cross-selling their products to each other's customers. For example if a merger is effected between a bank and an insurance undertaking, the insurance unit can sell its policies to the bank customers and the bank can encourage the customers of the insurance unit to open their accounts with the bank and hence the customer base of both the undertakings would be widened.

k) Potential Turnaround Situation: For a sick unit mergers and acquisitions provide a fresh lease of life protecting the diversified interests of all the concerned parties, i.e. shareholders, creditors, employees, managers etc. For this reason mergers are supported by the government also as they provide a ray of hope to the ailing and sick units and provide an opportunity for them to recover and survive.

l) Increase in Shareholders Wealth: An announcement of merger generally gives an impetus to the shareholders wealth and the synergistic operations lead to an increase in the Return per Share (RPS) and the market price of shares. However the shareholders of the acquired company are better off the shareholders of the merged entity. The shareholders of the merging firm gain in the long run due to the growth prospects available.

m) Benefits to Management: it is very important to involve the management of the firm while effecting mergers because an unwilling management may pose lot of problems while effecting a merger. Managers usually benefit from increased salary, perks, bonus, security, stature etc. if doubts exist in the mind of the management in terms of their future and job security after the merger, they do not cooperate, which results in difficulties in effecting the merger or acquisition.

6.12 Limitations of the Study

The major limitation of the study relates to availability of published data relating to the Mergers and Acquisitions (M&A's), trend and the associated financials of the industry. Also the financials of the companies which are involved in Mergers and Acquisitions (M&A's) are not readily available. In case of non-listed companies it is even more difficult. The study related to the Mergers and Acquisitions (M&A's) of the Indian Steel Industry since liberalization and there is no single data base which keeps the financial profiles of all the relevant companies since then. The effect of the Mergers and Acquisitions (M&A's) is felt after few years and it is seen that the data base for years before the merger is not maintained necessarily. Also it is seen that once the Mergers and Acquisitions (M&A's) has been effected the financial details of the merging or acquired entity is difficult to access as often the merged or the holding entity does not maintain the data base for them and especially for previous years.

The problems faced by the Researcher in the computation of the data are mainly due to availability of data in the published sources. The annual reports of the companies have been collected from various sources but in certain cases due to the absence of certain figures few ratios could not be calculated. However an earnest attempt is made here to collect authentic data from various sources to ensure that the reliability of the results is not affected in any manner. Moreover the tests are calculated at 5percent level of significance which means that there is a probability that in a sample of 100 the result might be wrong 5 times.

6.13 Conclusion

In the present chapter the scope and objectives of the study has been carved out. The Research Design and Methodology has been discussed at length along with the description of various hypotheses that are undertaken. The samples, instruments of data collection and methods of tabulation are also discussed. The various statistical and accounting measures used in the study by the Researcher are discussed in detail. A mention of the limitations faced in the collection of the data has also been made.

After having discussed the Research Design and Methodology the next chapter deals with the study of the Indian Steel Industry since liberalization. It further gives a bird's eye view of the major Mergers and Acquisitions (M&A's) that have taken place both in the domestic and international scene in the Indian Steel Industry.

6.14 References

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Section-C

Testing of Hypotheses: Data Interpretation, Analysis, Results and Discussions

Chapter 7

Steel Industry in India since Economic Liberalization

Chapter 7

Steel Industry in India since Economic Liberalization

7.1 Introduction

In Section-B, the Researcher develops the research design and methodology for the thesis in order to provide the direction for carrying out the research related work. In this chapter the Indian Steel Industry is previewed regarding its growth and development *vis-a-vis* economic liberalization. The level of production, consumption, imports and exports are examined to trace the growing stature and its present global standing. The major steel producers and the recent financial performance of the Indian Steel Industry are also studied. In the end, major domestic and cross-border Mergers and Acquisitions (M&A's) deals that have taken place in the Indian Steel Industry are scrutinized.

7.2 Indian Steel Industry: An Overview

With the abolition of price regulation in 1992 the prices of steel are no longer regulated by the government but it is the demand and supply forces which determine the prices. In the past few years the steel industry has been experiencing an increase in the prices in India. The domestic inflation in India has been on the rise and coupled with the increase in the prices of raw material and increased demand for steel from both domestic and international quarters, it has put an upward pressure on the steel prices. Besides putting pressure on major steel producers to increase the production the government took measures like imposition of 15percent export duty to curb the exports in May 2008.[1] In terms of the steel sector India certainly seems to be firmly placed as one of the powers to reckon with in the world being the eighth largest producer of steel in the world. It is credited with producing quality products and has been classified in Tier II category quality products according to the ratings of "World Steel Dynamics". While EU and Japan are in top slot, USA and Korea are in the same class as is India[2].

As per the annual Report 2009-10 by the Ministry of Steel, India has climbed up the ladder in terms of ranking and is currently the fifth largest producer of steel in the world and is expected to become the second largest producer by 2012.[3]

Table 7.2.1: Major Steel Producers in India

Major Steel Producers (Government Undertakings)	**Major Steel Producers (Private)**
Steel Authority India Limited (SAIL)	Tata Steel Ltd (TSL)
Rashtriya Ispat Nigam Limited	JSW Steel Ltd
National Mineral Development Corporation Limited	Essar Steel Ltd.
Kudremukh Iron Ore Company Limited	Jindal Steel and Power Ltd
Manganese Ore (India) Limited	ISPAT Industries
MSTC Limited	Uttam Galva Steels Ltd
Ferro Scrap Nigam Limited	
Sponge Iron India Limited (SIIL)	
Metallurgical Engineering Consultancy Ltd (MECON)	
Hindustan Steelworks Construction Limited (HSCL)	
Bharat Refractories Limited	
Bird Group of Companies	

Source: Compiled from various Journals, Books, Websites and Articles[4][5]

Table 7.2.2 lists the top steel producers of the world in 2008. The merger of Arcelor and Mittal had created the world's biggest steel producer which was having production facilities that were almost three times the second largest steel producer Nippon Steel. The acquisition of Corus made Tata Steel the eighth largest producer of steel in the world with 24.4 million metric tonnes of production capacity. It is observed that while the difference in terms of production capacity for the top ten producers is marginal, it is just the top producer Arcelor-Mittal which is way ahead of its competitors. Keeping in view the current consolidation trend the position of any steel producer in the world rankings is not guaranteed.

Table 7.2.2: Top Steel Producers of the World (By Production in 2008)

Rank	Company	Production (million metric tons)
1	ArcelorMittal	103.3
2	Nippon Steel	37.5
3	Baosteel Group	35.4
4	POSCO	34.7
5	Hebei Steel Group	33.3
6	JFE	33.0
7	Wuhan Steel Group	27.7
8	Tata Steel	24.4
9	Jiangsu Shagang Group	23.3
10	US Steel	23.2

Source: List of Steel Producers, Retrieved from (http://en.wikipedia.org/wiki/List_of_steel_producers), 2008

The financial performance of the steel sector as a whole is discussed in Table 7.2.3. For 2004 the DER is comfortable at 2.56 while the CR is low at 0.90. The ICR is also reasonable at 2.91 while the Total Income/ Average Total Assets is less than 1 at 0.97 with 7.16percent profits being registered. For 2005 the DER fell by a huge margin to 1.34 while the CR increased to 1.25. The ICR was very high at 6.79 and the efficiency improved with Total Income/ Average Total Assets at 1.18. The level of profits was at 12.75percent. For 2006 the DER fell further to 1.17 while CR was stable at 1.26. ICR dropped to 4.77 while Total Income/ Average Total Assets dropped to 1.01. The profitability also dropped to 8.31percent. The DER fell below 1 to 0.99 and CR rose to 1.42. The ICR rose again to 5.79 and Total Income/ Average Total Assets was same at 1.01. Profitability was at 9.57percent. For 2008 the DER fell further to 0.87 while CR slipped to 1.30. The ICR fell to 5.36 while the Total Income/ Average Total Assets fell below 1 to 0.95. The profitability increased to 9.89percent. The DER increased to 1.03 and CR was at 1.23. The ICR was at 3.47 while the Total Income/ Average Total Assets fell to 0.80. The Profitability fell to 7.02percent.

Table 7.2.3: Recent Financial Performance of the Indian Steel Industry

Year	Debt Equity Ratio (DER)	Current Ratio (CR)	Interest Coverage Ratio (ICR	Total Income/ Average Total Assets	Profitability (Percentage) %
2004	2.56	0.90	2.91	0.97	7.16
2005	1.34	1.25	6.79	1.18	12.75
2006	1.17	1.26	4.77	1.01	8.31
2007	0.99	1.42	5.79	1.01	9.57
2008	0.87	1.30	5.36	0.95	9.89
2009	1.03	1.23	3.47	0.80	7.02

Source: Executive summary: Steel: 2003-04 to 2008-09, Centre for Monitoring Indian Economy (CMIE), Retrieved from
http://www.business-beacon.com/kommon/bin/sr.php?kall=wind&tab=6020&catcode=0101010501020000 (2009)

7.3 <u>Growth and Development of Indian Steel Industry since Liberalization</u>

The world war had an adverse impact on the iron and steel plants of most of the countries. For instance prior to 1945 Japan was a leader in the development of iron and steel but its plants and resources were severely hampered due to the war. Manchuria which was India's contemporary at a time in terms of production also was adversely affected due to the war. India was the only Asian country which came out unscathed out of the impact of the World War II and thus had the opportunity for rapid enhancement in the production and output of Iron and Steel[6].

As compared to other major economies of the world India, took part in the economic reforms relating to liberalization and globalization of the economy quiet late. The landmark year was 1991 and it took place in the backdrop of severe balance of payment crisis. However it is noticeable that the economic reform which took place was at a rapid pace, average growth rate for the period between 1992-93 to 2001-02 being around 6.0 percent which placed it among one of the fastest growing economies of the world[7].

The Indian Steel Industry is divided into producers of finished steel, semi-finished steel, stainless steel and pig iron. Both public and private enterprises form a part of the Steel Industry. It has become one of the fastest in terms of growth and relies on export as a major stimulant[8].

The year 1991-92 was a landmark year in the history of India as it was this year that economic reforms were introduced and changed the destiny of the country for years to come. Though the decision was taken in the back drop of balance of payment crisis, it has surely catapulted India to the position of one of the fastest growing developing country alongside China. The industrial sector was expected to face certain setbacks in 1991-92 due to the massive macro-economic changes initiated. The first eight months of the year 1991-92 had faced a mild recession leading to slowing down of industrial production.

Table7.3.1: Annual Growth Rates in Major Sectors of Industry

(In Percentage (%))

Year	**Mining**	**Manufacturing**	**Electricity**	**General**
Weight	11.46	77.11	11.43	100
April-October				
1990-91	1.7	12.7	7.4	10.6
1991-92	-0.2	-2.5	9.7	-0.6
1992-93	3.9	3.7	4.2	3.8

Source: Economic Survey 1992-93, Ministry of Finance, Government of India. Retrieved from http://indiabudget.nic.in/previouses.htm (1992-93)

On January 16, 1992 the price and distribution controls on iron and steel items that are manufactured by the integrated steel plants were withdrawn along with the Freight Equalization Scheme. However priority quota was to be maintained for the demands of defence, railways, small-scale industries, exporters of engineering goods and the North Eastern region.

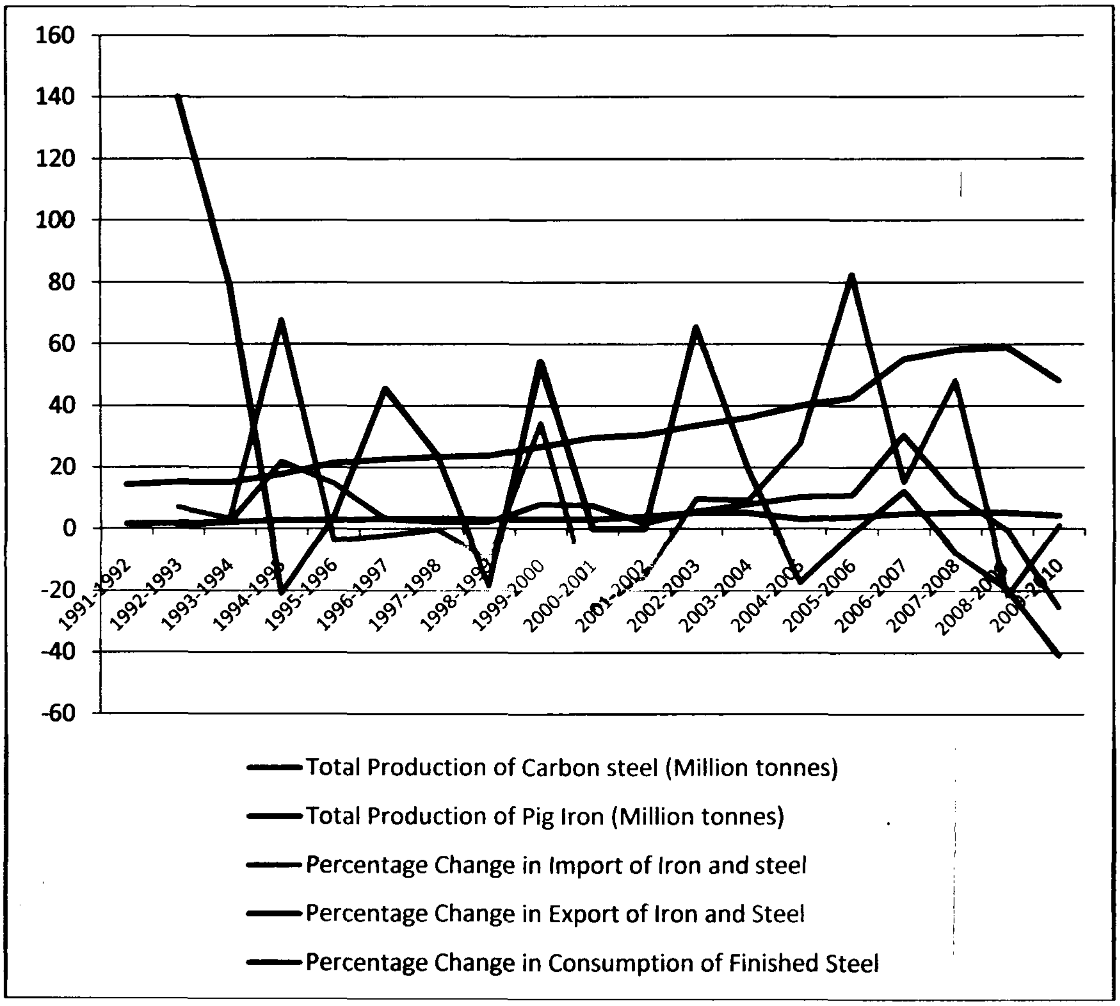
The production of saleable steel for the period April-December was 6.61 million tonnes. The finished steel production was 9.73 for the same period where the contribution of the secondary producers was 4.64 million tonnes. Production of pig iron steel was around 1.02 million tonnes[9].

For the year 1992 the industrial production did not change much and rather the manufacturing output fell marginally while the growth in mining sector fell sharply mainly due to a fall in demand owing to a weak economy. Supply side was also adversely affected due to shortage of imports and their rising costs[10]. Capital market was freed and various restrictions under FERA were removed along with liberalization in foreign exchange. The deregulation of steel led the steel producers to hike their prices by 15percent in order to meet the inflation in the input prices. The imports were freely allowed and the prices also gradually stabilized across the country.

The year 1992 saw the production of finished carbon steel was 14.33 tonnes where the secondary producers had a share of 14.5percent while in case of Pig Iron the production was 1.59 tonnes but the secondary producers share was lesser at 6.3percent. Production of DRI was even lesser at 1.31 tonnes. The total value of imports was Rs 1441.32 crores against an export of Rs 708 crores. The consumption of steel was 14.84 million tonnes. For the year 1993 the production of finished carbon steel was at 15.20 million tonnes while for pig iron it was at 1.85 million tonnes. The value of Imports increased by 6.9percent while that for exports increased by a huge 139.95percent. On the other hand, the consumption for finished steel increased by 1.08 percent. In the year 1994 the total production of carbon steel was stable at 15.2 million tonnes while that of Pig iron increased to 2.25 million tonnes. Import increased by 3.41percent against a 79.33percent increase in exports. The consumption also increased by 2.13percent. For 1995 carbon steel production increased to 17.82 million tonnes while the production of pig iron saw an increase to 2.79 million tonnes. In this year the trend reversed with imports increasing by 67.92percent while exports fell by 20.75percent. The consumption increased by 21.81percent. For the year 1996 the production of Carbon steel increased further to 21.4 million tonnes while imports fell by -3.72percent and exports again increased by 3.74percent. The consumption also increased by 14.85percent. For the year 1997 the carbon steel production was at 22.72 million tonnes while that of Pig iron was at 3.3 million tonnes. The imports fell by -2.25percent while the exports increased by 45.61percent. Consumption increased by 3.22percent. For 1998 the carbon steel production was at 23.37 million tonnes while the imports fell again and the exports increased by 23.99percent. In 1999 both the imports and exports fell by -9.81percent and -18.42percent respectively. For 200 the carbon steel production increased to 26.71 million tonnes while that of pig iron was at 3.18 million tonnes. Imports, exports and consumption surged significantly by 34.39percent, 54.22percent and 8.03percent respectively. In 2001 the imports fell again by 25.81percent while the exports increased marginally by 0.67percent. In 2002 the imports fell further by -15.75percent while exports were at the same level. The year 2003 saw imports rise again by 9.27percent but the exports increased significantly by 65.53percent. The year 20004 saw the production of carbon steel at 36.19 million tonnes while imports and exports increased by 9.27percent and 19.25percent respectively. For the year 2005 the imports increased by 27.82percent while exports fell by 17.21percent while the consumption increased by 10.33percent. In the year 2006 imports also doubled by 82.55percent while exports saw a fall by -1.53percent. The production of carbon steel increased to 55.15 million tonnes in 2007 while that of pig iron was at 4.99 million tonnes. Imports increased by 15.22percent while exports increased by 12.16percent. The consumption increased by 30.47percent. For 2008 imports again increased by a huge 48.35percent against a fall in exports by -7.66percent. In the year 2009 the production increased to 59.02 tonnes for carbon steel while it fell to 5.23percent for pig iron. Imports fell by -21.76percent while exports fell by -19.28percent. For the first time in two decades a fall in consumption was seen at -0.62percent. The year 2010 saw production of carbon steel fall to 48.11percent while that for pig iron at 4.3percent. The imports increased by 1.2percent and a fall in exports was witnessed at -40.73percent. The consumption saw a major fall in the wake of global recession at -25.23percent.

The above discussion highlights a steady increase in production, export and consumption. The fall in recent years can be attributed to the fall in the global demand owing to recessionary forces.

Figure 7.3.1: Production, Import, Export and Consumption of Steel



Source: Table 7.3.2, Table 7.3.3, Table 7.3.4, Table 7.3.5 and Table 7.3.6

Table 7.3.2: Production of Finished Carbon Steel (In Million Tonnes)

Year	Main Producers	Secondary Producers	Grand Total	Percent Of Share Of Secondary Producers
1991-1992	7.96	6.37	14.33	14.50%
1992-1993	8.41	6.79	15.2	44.70%
1993-1994	8.77	6.43	15.2	42.30%
1994-1995	9.57	8.25	17.82	46.30%
1995-1996	10.59	10.81	21.4	50.60%
1996-1997	10.54	12.18	22.72	53.60%
1997-1998	10.44	12.93	23.37	55.32%
1998-1999	9.86	13.24	23.82	57.32%
1999-2000	11.2	15.51	26.71	58.07%
2000-2001	12.51	17.19	29.7	57.88%
2001-2002	13.05	17.58	30.63	57.40%
2002-2003	14.39	19.28	33.67	57.27%
2003-2004	15.19	21	36.19	58.03%
2004-2005	15.61	24.44	40.05	61.02%
2005-06 (Provisional)	16.236	26.4	42.636	61.92 %
2006-2007	17.39	37.756	55.146	68.46%
2007-2008	17.765	40.565	58.233	69.54%
2008-2009	17.02	42	59.02	71.16%
2009-2010 (Apr-Dec) (Provisional)	12.887	35.224	48.111	73.21%

Source: Joint Planning Committee (JPC), Ministry of Steel, Government of India, Retrieved from http://steel.nic.in/development.htm, (April 2010)

(b) Pig Iron Production

The total production of Pig Iron was 5.289 million tonnes in 2008-09 as compared to 1.59 million tonnes in 1991-92. Earlier Pig Iron was produced primarily by the integrated steel plant of SAIL and RINL. Of late, the share of stand-alone pig iron units has increased significantly.

Table 7.3.3: Producer - Wise Production of Pig Iron (In Million Tonnes)

Year	Main Producers	Secondary Producers	Grand Total	Percentage share of the Secondary Producers
1991-1992	1.49	0.1	1.59	6.30%
1992-1993	1.68	0.17	1.85	9.20%
1993-1994	1.98	0.27	2.25	12.00%
1994-1995	2.01	0.78	2.79	28.00%
1995-1996	1.74	1.06	2.8	37.90%
1996-1997	1.73	1.57	3.3	47.50%
1997-1998	1.7	1.68	3.39	49.50%
1998-1999	1.37	1.6	2.97	53.87%
1999-2000	1.24	1.94	3.18	61.08%
2000-2001	0.96	2.15	3.11	69.13%
2001-2002	1.02	3.05	4.07	75.04%
2002-2003	1.11	4.18	5.29	79.05%
2003-2004	0.97	4.25	5.22	81.48%
2004-2005	0.625	2.603	3.228	80.63%
2005-06 (Provisional)	1.006	2.85	3.856	73.91 %
2006-2007	0.86	4.133	4.993	82.77%
2007-2008	0.936	4.378	5.314	82.38%
2008-2009	0.589	4.7	5.289	88.86%
2009-2010 Apr-Dec (Provisional)	0.575	3.729	4.304	86.64%

Source: Joint Planning Committee (JPC), Ministry of Steel, Government of India, Retrieved from http://steel.nic.in/development.htm, (April 2010)

Table 7.3.4: Import of Iron and Steel (In '000 Tonnes)

Year	Pig Iron	Steel TOTAL (CARBON)	Total Value (Pig Iron + Steel) (Rs. In Crores)	Percentage Change for Steel TOTAL (CARBON
1991-1992	152	1043	1441.32	
1992-1993	73	1115	1676	6.903164
1993-1994	21	1153	1613	3.408072
1994-1995	1	1936	2536	67.9098
1995-1996	8	1864	3181	-3.71901
1996-1997	15	1822	3053	-2.25322
1997-1998	3	1815	2904	-0.38419
1998-1999	2	1637	N.A.	-9.80716
1999-2000	3	2200	N.A.	34.39218
2000-2001	2	1632	N.A.	-25.8182
2001-2002	2	1375	N.A.	-15.7475
2002-2003	1	1510	N.A.	9.818182
2003-2004	2	1650	.N.A.	9.271523
2004-2005	8	2109	N.A.	27.81818
2005-2006	3	3850	N.A.	82.55097
2006-2007 Partly Estimated	3	4436	N.A.	15.22078
2007-2008	11	6581	N.A..	48.35437
2008-2009 Partly Estimated	8	5149	N.A.	-21.7596
2009-2010 April-Dec Partly estimated	10	5211	N.A.	1.204117

Source: Joint Planning Committee (JPC), Ministry of Steel, Government of India, Retrieved from http://steel.nic.in/development.htm, (April 2010)

Although India started exporting steel way back in 1964, exports were not regulated and depended largely on domestic surpluses. However, in the years following economic liberalisation, export of steel recorded a quantum jump.

Table 7.3.5: Export Of Iron and Steel (In '000 Tonnes)

Year	Pig Iron	Semis	Finished Carbon Steel	Total Steel	Total Value Rs Crores	Percentage Change for Total Steel
1991-1992	-	5	368	373	283	
1992-1993	16	154	741	895	708	139.9464
1993-1994	620	585	1020	1605	1678	79.32961
1994-1995	466	399	873	1272	1438	-20.7477
1995-1996	502	395	925	1320	1939	3.773585
1996-1997	451	300	1622	1922	2231	45.60606
1997-1998	785	503	1880	2383	2512	23.98543
1998-1999	281	174	1770	1944	N.A.	-18.4222
1999-2000	290	328	2670	2998	N.A.	54.21811
2000-2001	230	195	2805	3000	N.A.	0.066711
2001-2002	242	270	2730	3000	N.A.	0
2002-2003	629	460	4506	4966	N.A.	65.53333
2003-2004	576	701	5221	5922	N.A.	19.25091
2004-2005	393	261	4381	4903	N.A.	-17.207
2005-06	440	350	4478	4828	N.A.	-1.52968
2006-2007 Partly estimated	350	665	4750	5415	N.A.	12.15824
2007-2008	560	373	4627	5000	N.A.	-7.6639
2008-2009 Partly Estimated	350	554	3482	4036	N.A.	-19.28
2009-2010 Apr-Dec Partly Estimated	227	293	2099	2392	.N.A.	-40.7334

Source: Joint Planning Committee (JPC), Ministry of Steel, Government of India, Retrieved from http://steel.nic.in/development.htm, (April 2010)

Apparent consumption (i.e. production + imports - exports +/- variation in stocks) of finished steel, year-wise, has been shown below. Apparent consumption represents the actual demand of steel in a particular period/year. It has increased from 14.84 million tonnes in 1991-92 to 54.833 in 2008-09.

Table 7.3.6: Apparent Consumption of the Finished Steel (Carbon)

		(in million tonnes)
Year	**Apparent Consumption of Finished Steel**	**Percentage Change over Previous Year**
1991-1992	14.84	
1992-1993	15	1.078167
1993-1994	15.32	2.133333
1994-1995	18.66	21.80157
1995-1996	21.43	14.84459
1996-1997	22.12	3.219785
1997-1998	22.63	2.305606
1998-1999	23.15	2.297835
1999-2000	25.01	8.034557
2000-2001	26.87	7.437025
2001-2002	27.35	1.786379
2002-2003	28.897	5.656307
2003-2004	31.169	7.862408
2004-2005	34.389	10.33078
2005-06 (Provisional)	38.151	10.93954
2006-2007	49.777	30.47364
2007-2008	55.174	10.84236
2008-2009	54.833	-0.61804
2009-2010 (Apr-Dec) (Provisional)	40.997	-25.233

Source: Joint Planning Committee (JPC), Ministry of Steel, Government of India, Retrieved from http://steel.nic.in/development.htm, (April 2010)

As regards Additional Capacity Creation in Private Sector Since 1991 it is seen that after de-licensing of Indian Iron and Steel Industry and as a result of the steps taken for creation of additional capacity in the private sector, 19 projects involving a total investment of Rs. 30,835 crores equivalent to a capacity of approx. 13 million tonnes per annum have already been cleared by Financial Institutions and are in various stages of implementation. Already 8 units with a total capacity of Approx 5.45 million tonnes have already been commissioned[11].

The present scenario has witnessed a sea of changes over the past decade where there the competition is no longer restricted to within the domestic frontiers and correspondingly it has created a competitive and globalized environment where only the fittest can survive. There can be no compromises on the issues of performance, efficiency, utilization of resources, productivity, price reduction, cost control and most importantly customer satisfaction. The Steel Industry as it stands today is globalized where production facilities of different countries complement each other in order to sustain, survive and excel in meeting out the competition that exists in the global market arena. Technological obsolescence is another major issue faced by this industry, where the latest technology has to be incorporated from time to time in order to keep the competitive edge. The country or the unit that succeeds in maintaining technological superiority gets an unsurpassable lead over its competitors.

7.4 *Major Mergers and Acquisitions (M&A's) in the Indian Steel Sector*

After discussing the growth and development of the Indian Steel Sector since 1991 the Researcher makes an attempt to shed light on the recent Mergers and Acquisitions (M&A's) deals that have occurred in the steel industry of India. Table 7.4.1 highlights some of the major deals.

The deal between Rolloy Metals Ltd and Graham Firth Steel was affected on the order of Board for Industrial and Financial Reconstruction (BIFR) in 1991. The merger of Titaghur Paper Mills and Titagarh Steels was under the diversification programme undertaken by the latter in 1994. The merger of Powmex Steel in 1995 did not go very well with GKW Steels which suffered losses out of its steel division in the latter years. The year 1995 also witnessed the merger between Comet Steels and Jai Corp. The merger of Lloyd Steel in 1997 was a part of the backward integration strategy of Lloyd Metals and Engineers Ltd.

In 1999 SAIL merged its loss making enterprise Visvesvaraya with itself. The 1999 takeover of JSW Steel by Jindal Iron and Steel was a part of corporate restructuring rather than a strategic deal and so was the takeover of Tata Steel by Tata Sons. The merger with of Tata SSL which was a leading manufacturer of steel wires, ropes and profiles with TISCO was again a corporate restructuring move. Electrosteel castings which is the largest ductile manufacturer in the country merged Calcutta Steel with itself in 2002. The takeover of the two companies of Lanco Group that is Lanco Kalhasthi Castings Ltd and Lanco Industries Ltd gave an edge to Electrosteel Castings in the sphere of cast iron and ductile iron cast pipes. Kawasaki steel of Japan took over a 10percent equity stake in Neel Metal Products of India for Rs 10 million in an agreement to provide it with the requisite technology for automotive steel sheets.

Also AIA Engineering Ltd went on to takeover Welcast Steels Ltd in the year 2003. Jindal Iron and Steel company (JISCO) and Jindal Vijayanagar Steel Limited (JVSL) were merged to form JSW Steel Limited. Jindal Iron and Steel Limited entered into a private equity deal with the Bahrain based Citicorp Banking Corp in 2003 which was done through direct investment and secondary market.

SAIL merged its loss making subsidiary IISCO in 2004 and expanded its operating capacity. Tata Steel took over Singapore based NatSteel in 2005 and gave a push to its global operations and access to foreign suppliers and customers. JSW Steel merged Euro Ikon Iron Steel Private Ltd, Euro Coke Energy Private Ltd and JSW Power Ltd in 2005 and expanded its operational capacity further.

Pittsburgh Iron and Steel limited in its bid to enter into the steel business merged with Bellary Steel in 2006. Indian Metals and Ferro alloys merged its subsidiary Indian Charge Chrome Limied in 2006. Tata Steel kept up its global consolidation move with the acquisition of Millenium Steel of Thailand for US$ 167 million. It then went on to make the biggest acquisition ever by an Indian corporate by acquiring Corus which was Anglo-Dutch at US$ 12.04 billion which made it the world's fifth largest steel group.

Essar steel also made foreign purchases in 2007 which seemed to be the order of the day with the ongoing consolidation in the steel industry worldwide. It acquired the Canadian based Algoma Steel for 1.85 billion Canadian dollars and also the US based Minnesota Steel for an undisclosed amount. Another major steel producer of India JSW steel also made its presence felt in the global scenario with the purchase of three US Companies of Jindal United Steel, Saw Pipes USA and Jindal Enterprises for a combined value of $ 900 million with the idea of merging the three in future. JSW took over SISCOL in 2007 in its bid to expand and pumped in funds to boost its operating capacity. Kirloskar Brothers took over the loss making Kolhapur Steel to increase its operational capacity in 2008.

In 2009 through its subsidiary Tata Steel Global Mineral Holdings Pte Limited additional shares of Riversdale Mining Limited of Australia were purchased which took its stake to 19.38percent. Essar Steel acquired Shree Precoated Steels in 2009 which was expected o provide a big boost to its production capacity. World largest steel maker Arcelor-Mittal through their subsidiary Arcelormittal Netherland B .V acquired a stake in Uttam Galva Steel Limited and hence made an entry in the Indian market in 2009.

Table 7.4.1: Major Mergers and Acquisitions (M&A's) in Indian Steel Industry

Year	Nature of Deal	Target/Seller Co.	Merged/Acquirer Co.	Value of Deal
1991	Merger	Rolloy Metals Ltd. [merged]	Graham Firth Steel Products (india) Ltd.	Stock Deal
1994	Merger	Titaghur Paper Mills Co. Ltd.	Titagarh Steels Ltd. [merged]	Stock deal
1995	Merger	Powmex Steel	GKW Ltd	NA
1995	Merger	Comet Steels Ltd. [merged]	Jai Corp Ltd.	NA
1997	Merger	Lloyds Steel Inds. Ltd.	Lloyds Metals and Engineers Ltd	NA
1999	Merger	Visvesvaraya Iron and Steel Ltd. [merged]	Steel Authority Of India	ND
1999	Takeover	J S W Steel Ltd.	Jindal Iron and Steel Co. Ltd. [merged]	NA
1999	Takeover	Tata Steel Ltd.	Tata Sons Ltd.	NA
2002	Merger	Tata S S L Ltd. [merged]	Tata S S L Ltd. [merged]	Stock Deal
2001	Merger	Calcutta Steel Co. Ltd. [merged]	Electrosteel Castings Ltd.	Stock Deal (1:25)
2002	Takeover	Lanco Kalahasthi Castings Ltd. [merged]	Electrosteel Castings Ltd.	Stock deal
2002	Takeover	Lanco Industries Ltd.	Electrosteel Castings Ltd.	Stock deal
2002	Takeover	Neel Metal Products Ltd.	Kawasaki Steel Corp, Japan	Rs 10 million
2003	Takeover	Welcast Steels Ltd.	A I A Engineering Ltd.	NA
2003	Merger	Jindal Iron and Steel Co. Ltd. [merged]	J S W Steel Ltd.	NA
2003	Takeover	Jindal Iron and Steel Co. Ltd. [merged]	Citicorp Banking Corpn, Bahrain	US$ 10MM approximately
2004	Merger	Indian Iron and Steel Co. Ltd. [merged]	Steel Authority Of India Ltd	NA
2005	Takeover	NatSteel	Tata Steel	US$ 468.1 million
2005	Merger	Euro Coke and Energy Pvt. Ltd. [merged]	J S W Steel Ltd.	Stock Deal (1:19)

2005	Merger	Euro Ikon Iron and Steel Pvt. Ltd. [merged]	J S W Steel Ltd.	Stock Deal (1:16)
2005	Merger	J S W Power Ltd. [merged]	J S W Steel Ltd.	Stock Deal (1:25)
2006	Takeover	Bellary Steels and Alloys Ltd.	Pittsburgh Iron and Steels Ltd.	NA
2006	Merger	Indian Charge Chrome Ltd. [merged]	Indian Metals and Ferro Alloys Ltd	NA
2006	Takeover	Millenium Steel	Tata Steel	US$167 million
2007	Takeover	Corus Group Plc	Tata Steel U K Ltd.	US$ 12.04 billion
2007	Takeover	Tata Steel Ltd.	Rawmet Ferrous Inds. Pvt. Ltd.	Rs 101 crore
2007	Takeover	Algoma Steel Inc.	Essar Steel Holdings Ltd.	1.85 billion Canadian Dollars
2007	Takeover	Minnesota Steel L L C	Essar Steel Holdings Ltd.	NA
2007	Takeover	Saw Pipes Usa Inc	JSW Steel Limited	Combined value of US$ 900 million
2007	Takeover	Jindal United Steel Corpn.	JSW Steel Limited	
2007	Takeover	Jindal Enterprises L L C	JSW Steel Limited	
2007	Takeover	Southern Iron and Steel Co. Ltd. [merged]	Jindal Iron and Steel Co. Ltd. [merged]	Stock deal (1:22)
2008	Takeover	Kolhapur Steel Ltd.	Kirloskar Brothers Ltd.	NA
2009	Takeover	Riversdale Mining Ltd.	Tata Steel Global Minerals Holdings Pte Ltd.	NA
2009	Takeover	Shree Precoated Steels Ltd.	Essar Steel Ltd.	Rs 600 crores
2009	Takeover	Uttam Galva Steels Ltd.	Arcelormittal Netherland B .v	Rs 422 crores

Source: Compiled from Centre of Monitoring Indian Economy (CMIE) Retrieved from http://www.business-beacon.com/kommon/bin/sr.php?stext=steel&mrg=mrg&tak=tak&mnasrchsub=Search&tab=5010&kall=wind&catcode=0101010501020000 (2009) and various other Journals, Articles and Websites.

7.5 Conclusion

The chapter traces the growth and development of the Indian steel industry as a global industry sine liberalization reforms in 1991. The growth in production and consumption since 1991 depict the steady increase in both the demand and supply. Also the increases in exports are traced while imports show a hike generally during times where there are unfavourable macro factors. The major producers of steel in the world and in India are discussed at length which is followed by a report on the recent financial performance of the Indian Steel Industry. The major Mergers and Acquisitions (M&A's) deals are also extensively dealt with a brief description of all. Having studied the background of the Indian Steel Industry the next chapter involves a detailed financial analysis of five major domestic Mergers and Acquisitions (M&A's) that have taken place in India. The impact of the merger on the performance of both the acquiring and the acquired entity are taken into account for the same.

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Chapter 8

Analysis of Domestic Mergers and Acquisitions (M&A's) of Steel Industry in India

Chapter 8

Analysis of Domestic Mergers and Acquisitions (M&A's) of Steel Industry in India

8.1 Introduction:

The preceding chapter presented a synoptic view of the Indian Steel Industry and the major Mergers and Acquisitions (M&A's) which have taken place. The present chapter provides a detailed financial analysis on five major domestic Mergers and Acquisitions (M&A's) that have taken place and critically analyze the same. The main objective is to find out the Post Merger performance of the companies and compare them with the Pre Merger results in order to find out the profitability and rationale of the merger. Various accounting and financial tools are employed for the analysis.

8.2 Visvesvarya Iron and Steel Limited (VISL) and Steel Authority of India Limited (SAIL) (1998-99) : Pre and Post Merger Performance Assessment

a) Visvesvaraya Iron and Steel Limited (VISL)

Visvesvaraya Iron and Steel Ltd was taken over as subsidiary of SAIL in 1989 and the former was subsequently merged with the latter in 1998-99 mainly because both were involved in the business of steel and alloys.

The merger was expected to provide a boost to the operating capacity of SAIL and a hope for VISL to come out of losses.

Pre-Merger Analysis

The financial analysis of both the undertakings is done in Table 8.2.1 and 8.2.2. The total income for the year 1994 was Rs 209.63 crore. The PAT net of P&E/Total

Income was -9.97 with RONW and ROCE at -60.32 percent and 14.66 percent. The total income increased by 4.17 percent in 1995 but the PAT net of P&E/Total Income, RONW and ROCE deteriorated further to -11.83 percent, 74.47 percent and -12.25 percent respectively. In the year 1996 the income registered an increase of 6.92 percent. The dismal condition of the concern however continued with PAT net of P&E/Total Income at -18.64 percent. The RONW and ROCE also worsened to - 108.04 percent and -16.4 percent respectively. In 1997 the income again increased by 11.91 but there was no improvement in the operations with PAT net of P&E/Total Income at -37.56 percent the RONW was at a dismal -93.12 percent and ROCE was at a sorry -38.28 percent. The trend of rising income was also stalled in the year 1998 with income falling by 13.12 percent. The PAT net of P&E/Total Income was at 37.29 percent, RONW at 52.19 percent and ROCE at 34.17 percent.

Table 8.2.1: Pre-Merger Total Income of Visvesvaraya Iron and Steel Ltd (1994-1998)

(Figures in Rupees Crore)

Year	Total Income	Percentage Increase over Previous Year
1994	209.63	
1995	218.36	4.17
1996	233.48	6.92
1997	261.29	11.91
1998	227	-13.12

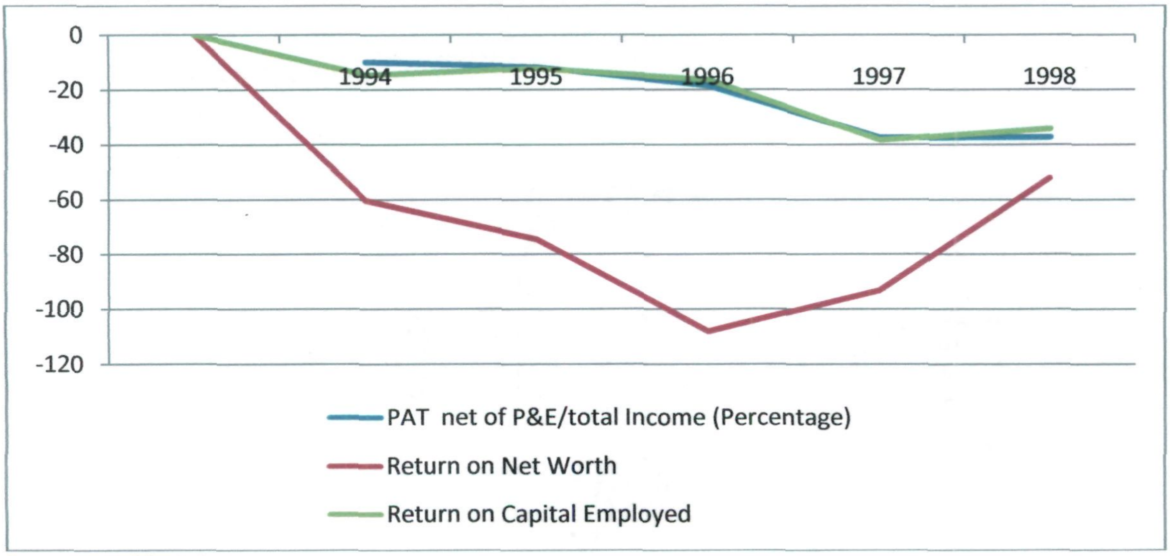
Source: Compiled and Calculated from Center of Monitoring Indian Economy <http://www.businessbeacon.com/kommon/bin/sr.php?kall=wcoshv&repnum=2595&ver=pf&cocode=269343>

Table 8.2.2: Pre-Merger Ratios of Visvesvaraya Iron and Steel Ltd. (1994-1998)

Year	PAT net of P&E/total Income (Percentage)	Return on Net Worth (RONW)	Return on Capital Employed (ROCE)
1994	-9.97	-60.32	-14.66
1995	-11.83	-74.47	-12.25
1996	-18.64	-108.04	-16.4
1997	-37.56	-93.12	-38.28
1998	-37.29	-52.19	-34.17

Source: Compiled and Calculated from Center of Monitoring Indian Economy <http://www.businessbeacon.com/kommon/bin/sr.php?kall=wcoshv&repnum=2595&ver=pf&cocode=269343>

Figure 8.2.1: Pre Merger Ratio Analysis of Visvesvaraya Iron and Steel Limted



Source: Table 8.2.2

Testing of Hypotheses:

1. **H_0 (Null Hypothesis) = There is no relation between the Pre-merger Profitability of Visvesvaraya Steel and Post Merger Profitability of SAIL**
   H_α (Alternative Hypothesis) = There is a relation between the Pre-merger Profitability of Visvesvaraya Steel and Post Merger Profitability of SAIL

Table 8.2.3 investigates the profitability aspect and finds that the correlation coefficient (r) is -0.30 which reflects moderate degree of negative correlation between the two parameters. The regression equation Y on X where Y is the dependent and X is the independent variable shows that one unit of change in X, i.e. pre-merger profitability of Visvesvarya leads to -0.43 unit changes in the post-merger profitability of SAIL. The intercept is high at -28.06 showing that the post-merger profitability of SAIL was affected by other factors more than the pre-merger profitability of SAIL. The coefficient of determination (r^2) is at 0.09 indicating that a very minimal amount of variance is explained that is the pre-merger profitability of Visvesvarya has a limited impact on the post-merger profitability of SAIL. The statistical significance is tested using the t-test. The t-test value comes out to be 0.47 when four years before and after the merger are undertaken while the table value of t for v=8 at $t_{0.05}$ is 2.31. The calculated value being less than table value leads to **acceptance of Null Hypotheses** signifying that there is no relation between the pre and Post Merger profitability

However if we take in to consideration eleven years of post-merger, it gives the t-value at 2.22. The table value of t for v=14 at $t_{0.05}$ is 2.15. Here, **Null Hypothesis rejected and Alternative Hypothesis accepted** stating that there is a relation between the two and it is statistically significant.

Thus the merger has an effect on the operations of Visvesvaraya which turned into a profit making enterprise. The operation of Visvesvaraya has a negative impact on the operation of SAIL. It had to recoup from the loss making operations of Visvesvarya. It is thus noted that the merger takes time for showing effects too.

2. **H_0 (Null Hypothesis) = There is no relation between the Pre-merger CETR of Visvesvaraya Steel and Post Merger CETR of SAIL**
   H_a (Alternative Hypothesis) = There is a relation between the Pre-merger CETR of Visvesvaraya Steel and Post Merger CETR of SAIL

Further Table 8.2.3 explores the CETR and shows that that there is a moderate degree of negative correlation between the pre-merger CETR of Visvesvaraya and post-merger CETR of SAIL reflecting that it had a negative impact on the latter. However the regression equation where post-merger CETR of SAIL is the dependent variable and pre-merger CETR of Visvesvarya is the independent variable shows that a unit change in CETR of Visvesvaraya had a -0.01 units change on the CETR of SAIL. The constant is high at 0.64 showing that other factors had a greater role to play in the movement of CETR of SAIL. The coefficient of determination (r^2) is also on the lower side at 0.41 supporting the view that the two variables are not closely related. The t-test conducted for five years before and after the merger give the t-value at 4.43 while the table value of t for v=8 at $t_{0.05}$ is 2.31. Hence **the Null Hypothesis is rejected while the Alternative is Hypotheses accepted** signifying that the relation is statistically significant.

When eleven years of post-merger are undertaken, the t-test undertaken shows that the t-value is 6.96 while the table value of t for v=14 at $t_{0.05}$ is equal to 2.15. The calculated value is more than the table value indicating that the results are statistically significant and **the Null Hypothesis is rejected while the Alternative Hypotheses accepted.**

Hence the CETR of Visvesvarya had a limited impact on the movement of CETR of SAIL after the merger.

Table 8.2.3: Pre and Post Merger Analysis of Profitability and CETR of Visvesvaraya

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
1. **X= Pre-Merger Profitability of Visvesvarya Y=Post-Merger Profitability of SAIL**	-0.30	0.09	Y on X is Y=-0.43X -28.06	t=0.47* t=2.22**
2. **X= Pre-Merger CETR of Visvesvarya Y=Post-Merger CETR of SAIL**	-0.64	0.4096	Y on X is Y=-0.01X+0.64	t=4.43* t=6.96**

*Five years of Pre and Post Merger undertaken
**Five years of Pre-Merger and eleven years of Post Merger undertaken
Source: Compiled and Calculated from Table 8.2.2 and Table 8.2.7

The pre-merger analysis of Visvesvarya Iron and Steel Limited reflect that the financial condition of the concern was not stable. There was a consistent fall in the PAT, RONW and ROCE for Visvesvaraya Iron and Steel Limited from 1994-98. For the year 1998 the total income fell by -13.12 but the main source of worry was the PAT net of P&E/total Income (Percentage) at -7.29 percent and it was negative for consecutive five years. The hypothesis testing though regression analysis shows that the profitability and CETR of VISL had a limited impact on the Post Merger financials of SAIL, i.e. at -0.43 and -0.01 units. The correlation coefficient was negative in both cases. VISL was a loss making unit and its merger with its parent company gave it a new lease of life. The merger made it possible for SAIL to write off its losses and get deductions on tax payments. The dismal state of affairs led to a proposal of its being taken over by the Defence Ministry as 60 percent of its products that is alloy steel were required by it. The proposal however did not materialize and its association with SAIL continued. It was in November 2004 that VISL started making profits and since then it has been a profitable concern for SAIL[1]

b) Steel Authority of India Limited (SAIL)

SAIL is one of the largest steelmaker of India and ranks among the top five corporate in India in terms of profit earning. It is the 16th largest producer of steel in the world. It is wholly owned by the government of India and trades publically in the market. It has five Integrated Steel Plants, three Special Steel Plants and one subsidiary[2]. In this section its merger with its special Steel plant Visvesvarya Iron and Steel Plant (VISL) in Karnataka is analysed.

Pre-Merger Analysis

The year 1993 saw the sales of SAIL at Rs 10175 crores against an expenditure of Rs 9776 crores. The ratio analysis shows that the year 1993 saw ICR at 1.63 and CETR at 1.16. The DER indicated the leverage at 1.81 while the FATR was also impressive at 0.94. Profits were achieved at 4.16 percent. The year 1994 saw sales increase by a further 14.71 percent against a surge of just 7.48 percent in expenditure. ICR improved to 1.71 while CETR also moved to 2.00. DER was ideal at 2 while the FATR was stagnant at 0.94. The profits also moved up marginally to 4.67. The liberalization measures taken up were having a positive impact but overall the demand of steel was most stagnant and was facing increased competition from the domestic sector. However the situation looked upbeat and it was hoped that it would improve soon. SAIL was at its feet coping up with the changes with the exports surging by 130 percent[3].

For the year 1995 sales increased by another 18.82 percent against an increase of 12.46 percent in expenditure. The ICR improved to 2.64 indicating that the company was equipped with financial surplus with the company in meeting its expenses. CETR also moved up to 1.29 and FATR remained at 0.94. DER fell marginally to 1.86 lowering the debt burden while the profitability almost doubled to 7.99 percent. For 1996 sales increased by a lesser rate at 6.08 percent while the expenditure increased at a higher rate at 10.23 percent. ICR and DER were relatively stable at 2.63 and 1.84 respectively while CETR fell down to 1.14 and FATR to 0.71 but the profits moved up marginally to 8.97 percent. The year was a landmark in the financial history of SAIL with the highest ever turnover and profits achieved. The figures revealed that a better strategy was employed which was yielding the desired results. The management adopted certain changes in the production, marketing and financial strategy in the form of product mix, technology, exports etc which worked in the company's favour. The same year SAIL for the first time issue GDR (Global Depository Receipts) worth US$ 125 million[4]. For the year 1997 the ICR dropped to 1.50, CETR to 0.76 and FATR to 0.72. The DER rose to 2.18 but the cause for worry was the fall in profits to 3.64 percent. For 1998 the sales rose by 3.49 percent against a rise of 1.34 percent in expenditure. The ICR fell further to 1.10 CETR to 0.69 and FATR to 0.69. The DER continued to rise to 2.36 increasing the debt proportion of the company and making it more leveraged. The management had an issue or two to handle with profitability dropping further down to 0.91 percent. As is evident by the figures the year was not very smooth. The major reasons being increased competition from domestic and international quarters coupled with a fall in the demand for Steel. It was a call to the management to introspect and make an even more concerted effort to bring out cost control and present the product to the customers in a more desirable way. It was not a situation to panic but definitely warranted a serious look into the affairs.

Table 8.2.4: Pre and Post-Merger Sales of SAIL (1993-2009)

Figures in Rupees Crore

Year	Sales	Percentage increase over previous year	Year	Sales	Percentage increase over previous year
1993	10175		1999	14963	2.32
1994	11671	14.71	2000	14311	4.36
1995	13867	18.82	2001	14110	-1.40451
1996	14710	6.08	2002	13519	-4.18852
1997	14131	-3.94	2003	16837	24.54324
1998	14624	3.49	2004	21297	26.48928
			2005	28523	33.92966
			2006	27860	-2.324
			2007	33923	21.76238
			2008	39508	16.46376
			2009	43150	9.218386

Source: Compiled and Calculated from the Annual Reports of SAIL from 1994 to 2009. Retrieved from http://www.sail.co.in/

Table 8.2.5: Pre and Post-Merger Expenditure of SAIL (1993-2009)

Figures in Rupees Crore

Year	Expenditure	Percentage increase over previous year	Year	Expenditure	Percentage increase over previous year
1993	9776		1999	13460	3.26
1994	10507	7.48	2000	13109	-2.61
1995	11816	12.46	2001	11943	-8.89465
1996	13025	10.23	2002	12508	4.730805
1997	13730	5.41	2003	14672	17.30093
1998	13914	1.34	2004	16645	13.44738
			2005	17426	4.6921
			2006	20479	17.5198
			2007	22957	12.1002
			2008	26553	15.66407
			2009	32208	21.29703

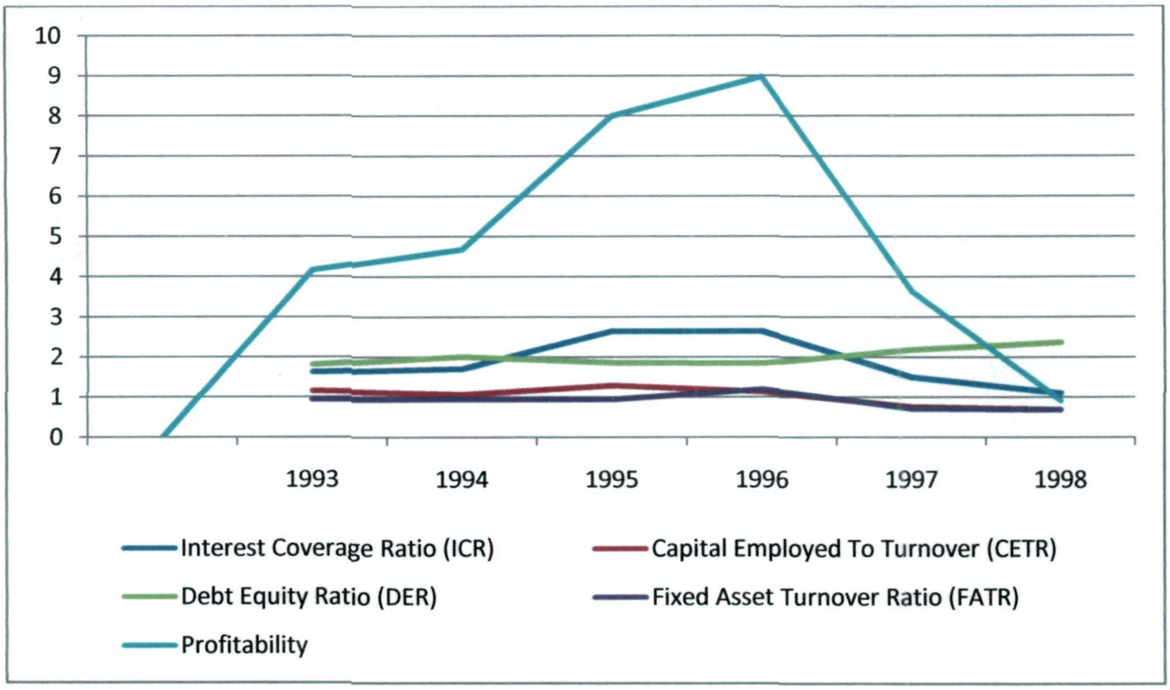
Source: Compiled and Calculated from the Annual Reports of SAIL from 1994 to 2009. Retrieved from http://www.sail.co.in/

Table 8.2.6: Pre Merger Ratio Analysis of SAIL (1993-1998)

Year	Interest Coverage Ratio (ICR)	Capital Employed To Turnover (CETR)	Debt Equity Ratio (DER)	Fixed Asset Turnover Ratio (FATR)	Profitability (%)
1993	1.63	1.16	1.81	0.94	4.16
1994	1.71	1.07	2.00	0.94	4.67
1995	2.64	1.29	1.86	0.94	7.99
1996	2.63	1.14	1.84	1.19	8.97
1997	1.50	0.76	2.18	0.72	3.64
1998	1.10	0.69	2.36	0.69	0.91

Source: Compiled and Calculated from Table 8.2.4, Appendix 1 and Appendix 2

Figure 8.2.2: Pre- Merger Ratio Analysis of SAIL (for merger with VISL)



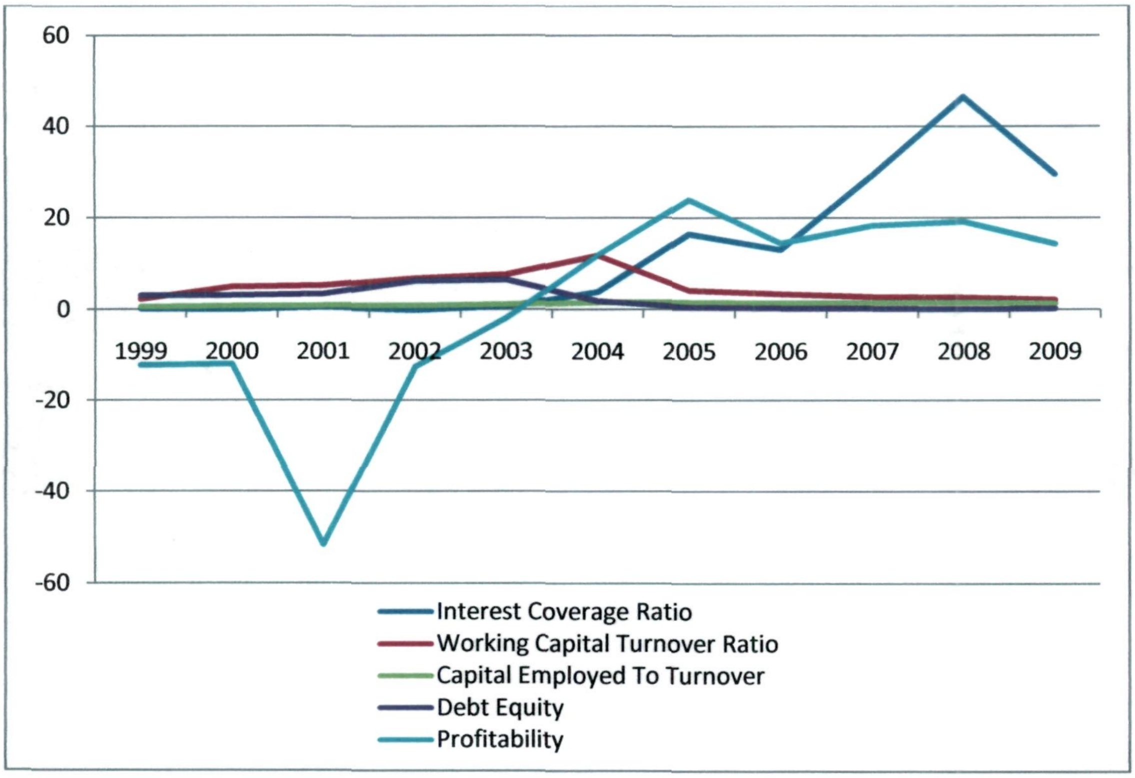
Source: Table 8.2.6

Table 8.2.7: Post-Merger Ratio Analysis of SAIL (1999-2009)

Year	Interest Coverage Ratio (ICR)	Capital Employed To Turnover (CETR)	Debt Equity Ratio (DER)	Fixed Asset Turnover Ratio (FATR)	Profitability (%)
1999	0.17	2.3	0.60	3.05	-12.32
2000	0.04	5.03	0.85	3.17	-12.02
2001	0.56	5.26	0.89	3.42	-51.67
2002	-0.09	6.87	0.91	6.23	-12.63
2003	0.76	7.67	1.16	6.5	-1.81
2004	3.88	11.79	1.59	1.87	11.8
2005	16.43	4.2	1.59	0.58	23.9
2006	13.07	3.48	1.48	0.35	14.4
2007	29.29	2.82	1.54	0.24	18.28
2008	46.39	2.7	1.6	0.13	19.08
2009	29.59	2.18	1.41	0.27	14.31

Source: Compiled and Calculated from Table 8.2.4, Appendix 3 and Appendix 4

Figure 8.2.3: Post-Merger Ratio Analysis of SAIL (for merger with VISL)



Source: Table 8.2.7

Testing of Hypotheses:

1. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger Profitability of SAIL**
   H_α (Alternative Hypothesis) = There is a relation between the Pre and Post-merger Profitability of SAIL

Table 8.2.8 depicts the correlation coefficient (r) between the X and Y that is the pre and Post Merger profitability of SAIL is -0.74 which signifies a moderate degree of negative correlation. The regression equations further show that for every one unit of change in the pre-merger profitability of SAIL, the Post Merger profitability was affected by -5.27 units. The constant is also high at 13.49 hinting at the role of various other factors besides the pre-merger profitability having a role to play in the movement of Post Merger profits of SAIL. The coefficient of determination (r^2) is at 0.54 indicating that a significant amount of variance is affected by the variable X on Y. The t-test undertaken for analyzing the pre and Post Merger values shows that the t-value for values undertaken six years before and after the merger gives the t value at 2.08. The table value of t for v=10 is 2.23. The calculated value being less than the table value leads to **acceptance of Null Hypotheses and rejection of Alternative Hypotheses** showing that there is no relation between the post and Pre Merger profitability and it is statistically insignificant at 95 percent significance level.

However when a span of eleven years after the Post Merger are taken into consideration, it gives the value of t as 0.45. The table value of t for v=15, $t_{0.05}$ is 2.13. Here again the calculated value being less than table value leads to **acceptance of the Null Hypothesis and rejection of the Alternative Hypothesis** showing that the relation between the pre and Post Merger profitability is statistically insignificant. Hence even in the longer run the relation is statistically insignificant here.

2. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger CETR of SAIL**
   H_α (Alternative Hypothesis) = There is a relation between the Pre and Post-merger CETR of SAIL

Table 8.2.8 further depicts the relation between the pre and Post Merger CETR of SAIL. The correlation coefficient is -0.84 reflecting a high degree of negative correlation. Regression equation shows that for every one unit of change in the Pre-merger CETR of SAIL the Post-merger CETR falls by -1.19. The constant or intercept is not very high at -0.21 undermining the importance of other factors. The coefficient of determination (r^2) is 0.702 showing that a considerable amount of variance is explained by the movement in variable X. The value of t for the six years of pre and Post Merger is 0.118 while the table value of t for v=10 at $t_{0.05}$ is 2.23 indicating that the calculated value being less than table value leads to **acceptance of Null Hypothesis and of rejection of Alternative Hypothesis** stating that there is a relation between the pre and Post Merger CETR.

When eleven years of Post Merger are undertaken t value is 4.20 against the table value of t for v=15, $t_{0.05}$ is 2.13. The calculated value is more than the table value indicating that the relation is statistically significant and in the longer run there is an effect of the merger on the Post Merger CETR. The **Alternative Hypothesis is accepted and the Null Hypothesis** is rejected here.

3. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger ICR of SAIL**
   H_a (Alternative Hypothesis) = There is a relation between the Pre and Post-merger ICR of SAIL

The relation between the pre and Post Merger ICR is shown in Table 8.2.8. The correlation coefficient (r) is -0.62 which shows a moderate degree of negative correlation. Regression equation shows that for every one unit of change in the pre-merger ICR, the Post Merger ICR falls by -1.61 units. The intercept is at 3.90 reflecting the role of other factors. The coefficient of determination (r^2) at 0.3844 reflects that not a large amount of variance in Post Merger ICR is explained by the pre-merger ICR. The t-test undertaken shows that the value of t for six years of pre and Post Merger at 1.48 while the table value of t for v=10 at $t_{0.05}$ is 2.23. The calculated value being less than the table value due to which **Null hypothesis is accepted and Alternative Hypothesis is rejected** showing that the relation is statistically insignificant and there is no relation between the pre and Post Merger ICR. When the value of t is calculated taking into consideration eleven years of Post Merger it gives the t value at 1.64 where the table value of t for v=15 at $t_{0.05}$ is 2.13. Here again the calculated value is less than the table value showing that there is no relation between the pre and Post Merger ICR and it is statistically insignificant. **Null Hypothesis is accepted while the Alternative Hypothesis is rejected.**

Table 8.2.8: Pre and Post Merger Analysis of Profitability, CETR and ICR of SAIL

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	**T-test
1. X= Pre-Merger Profitability of Sail Y=Post-Merger Profitability of SAIL	-0.74	0.54	Y on X is Y=-5.27X+13.49	t=2.08* t=0.45**
2. X= Pre-Merger CETR of SAIL Y=Post-Merger CETR of SAIL	-0.84	0.702	Y on X is Y=-1.19X-0.21	t=0.118* t=4.20**
3. X= Pre-Merger ICR of SAIL Y=Post-Merger ICR of SAIL	-0.62	0.3844	Y on X is Y=-1.61Y+3.90	t=1.48* t=1.64**

*Six Years of Pre and Post Merger Undertaken
**Six Years of Pre Merger and Eleven Years of Post-Merger Undertaken
Source: Compiled and Calculated from Table 8.2.6 and Table 8.2.7

4. **H_0 (Null Hypothesis) = There is no relation between the Post-merger Profitability and MPS of SAIL**
   H_a (Alternative Hypothesis) = There is a relation between the Post-merger Profitability and MPS of SAIL

Table 8.2.9 highlights calculations done to find out the relation between the Post Merger Profitability and Market Price per Share to see if the market price moves according to the profitability or not. It is seen that the correlation coefficient (r) is 0.66 reflecting a moderate degree of positive correlation between the profitability and MPS. The regression equations shows that when the profitability is taken as the dependent variable and MPS as the independent variable then a unit change in MPS leads to 0.25 units change in the profitability. The constant is also considerably high showing that when the value of the slope is zero the movement in X or profitability can be about -12.77 units. Also when the MPS is taken as dependent variable and the profitability as the independent variable it shows that a unit change in the profitability leads to 1.72 units change in the MPS. Here the intercept is very high at 55.94 showing that MPS is affected by many other factors besides the profitability. The coefficient of determination (r^2) is 0.4356 indicating that a considerable amount of variance can be explained by these factors. The calculated value of t is 2.85 and the table value of t for v=18 at $t_{0.05}$ is 2.10. Hence the calculated value being more than the table value leads to **rejection of the Null Hypothesis and acceptance of the Alternative Hypothesis** indicating that the relation is statistically significant.

Table 8.2.9: Post Merger Analysis of MPS and Profitability of SAIL

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	*T-test
4. X=Post-Merger Profitability of SAIL Y= Post Merger MPS of SAIL	=0.66	0.4356	X on Y is X=0.25Y-12.77 Y on X is Y=1.72X+55.94	2.85

*Ten years of Post Merger undertaken
Source: Compiled and Calculated from Table 8.2.7 and Appendix 5

Table 8.2.10 indicates the Profit Margin and Profit Rate. For Visvesvarya the Pre-merger average of Profit Margin is very low at -0.23 while for SAIL it is at 0.051. The Post-Merger statistic also does not change much for SAIL and it is 0.053. However when we compare it with the Pre-Merger Profit Margin of VISL, the result is impressive where it turned from a negative -0.23 to a positive 0.053. Thus the merger does not have a major impact on the Profit Margin of SAIL. The Profit Rate shows that the pre-merger average is 0.027 while the post-merger average is at 0.0456 showing a slight improvement. The percentage change in the Profit Margin for SAIL is 3.92 percent while the percentage change for the Profit Rate is 70.37. Hence the Post-Merger results reflect an improvement over the Pre-merger ones. The operating efficiency however improved at a much higher degree than the financial efficiency.

Table 8.2.10: Pre and Post Profit Rate and Profit Margin for Merger between SAIL and Visvesvarya

	Net Sales Profit Margin= $\frac{PAT}{NS}$			Total Assets Profit Rate= $\frac{PAT}{TA}$		
	Pre-merger Average	**Post-merger Average**	**Percentage Change**	**Pre-merger Average**	**Post-merger Average**	**Percentage Change**
a) Visvesvarya	-0.23	NA	-	NA	NA	
b) SAIL.	0.051	0.053	3.92	0.027	0.046	70.37

Source: Compiled and Calculated from Table 8.2.1, Table 8.2.2, Table 8.2.3, Table 8.2.4, Appendix 2 and Appendix 4

The analysis of SAIL in case of merger with Visvesvaraya shows that the profitability declined after the merger but it was due to the recession in the global and domestic steel industry. A restructuring plan was devised to bring about a turnaround in order to separate its non-core business from its main business of production and sale of steel[5]. The Testing of Hypothesis for various financial parameters reveals that the relation between the Pre and Post Merger Profitability, CETR and ICR is statistically insignificant. Only when six years of Pre Merger is compared to eleven years of Post Merger of CETR, the relation is significant. Hence the testing of Hypothesis supports the notion that the merger did not have much impact on the financials of SAIL. The relation between the Post Merger Profitability and MPS is however significant. The MPS is greatly affected by Profitability and other factors. The Profitability is affected by 0.25 units with a unit change in MPS while MPS is affected by 1.72 units change for a unit change in profitability. The intercept is high at 55.94. The study of the Profit Rate and Profit Margin also highlights the limited impact of the merger on the financial performance and greater effect on the operational performance with the increase in the Post Merger Profit Margin by 3.92 percent while the Post Merger Profit Rate increased by 70.37 percent.

The detailed post-merger analysis of sale, expenditure and ratio analysis of SAIL is presented in the following paragraphs where its subsequent merger with IISCO in 2006 is analyzed.

8.3 Indian Iron and Steel Company Limited (IISCO) and Steel Authority of India Limited (SAIL) (2005-2006) : Pre and Post Merger Performance Assessment

The Indian Iron and Steel Company (IISCO) in Burnpur was the country's second integrated steel plant in India after Tata Iron and steel Company. It was taken over by the Government of India in 1972 and subsequently nationalized. It was made a subsidiary of SAIL in 1979. It was merged with SAIL on 15 February 2006 and there was Rs 9600 modernization program inaugurated by Prime Minister Dr. Manmohan Singh on 24th December 2006 which is the largest investment in West Bengal in the last ten years.[6]

a) Indian Iron and Steel Company Limited (IISCO)

After the announcement of the merger in 2004 between the West Bengal based Indian Iron and Steel Company (IISCO) which was 100 percent subsidiary of SAIL with its parent company it was finally formalized in 2005-06. The merger required the approval of Board for Industrial and Financial Reconstruction (BIFR) due to the financial position of IISCO which revealed its dire economic conditions. It was running in to losses for around 30 years. Being the oldest integrated steel plant, the government sought the merger plan as a device to moot it out of its financial losses. Its financial losses were estimated to be around Rs 955 crores[7]. The merger with SAIL was expected to provide the much required influx of finance and technology. SAIL was also expected to benefit from the iron-ore reserves of IISCO.

Pre-Merger Analysis

Table 8.3.1 and 8.3.2 analyze the pre-merger financial position of IISCO. The total income in 1999-00 was Rs 944.98 crores. The DER was negative at -0.88 and CETR was also dismal at -0.62. Huge financial losses were incurred to the tune of 40.36 percent. The condition was no better in the following year in 2000-01 with the income falling by -0.25 percent while the expenditure was at 1113.26 percent. The DER worsened to -3.51 while liquidity was also low at 0.70. The FATR was respectable at 2.70 but the CETR was extremely low at -24.83. The losses fell but still were alarming at -21.59 percent.

For the year 2001-02 the income increased by 1.70 percent against an increase of 0.93 percent in expenditure. The DER was still negative at -0.59 while the CR fell further to 0.53. FATR was satisfactory at 2.84 and CETR bettered to -4.24. The trend of decline in losses continued with losses being reported at -20.04 percent. The increase in output and better technology and product mix helped reducing the losses but cost reduction was still an issue at hand along with sluggish demand of Steel. The year 2002-03 saw income increase by 0.11 percent against a fall in expenditure by -7.63 percent. DER improved slightly but continued to be negative at -0.33. Liquidity worsened with CR falling to 0.35. FATR further improved to 3.02 while the CETR was at -2.36. The losses again increased to -22 percent. For the next year that is 2003-04, the total income increased by 6.06 percent against an increase of 6.12 percent in expenditure. DER was at a low of -0.18 percent while the CR was at 0.34. FATR increased to 3.40 while the CETR improved to -1.73. The losses further increased to -24.30. It seemed that the management of IISCO was not able to handle the issue at hand and the rising input cost did not help their cause further. For the year 2003-04 the income increased by another 15.12 percent against a fall of -3.42 percent in expenditure. The situation with the capital structure did not show much improvement with the DER at-0.47 while the CR also fell to a low of 0.23. FATR rose to 4.12 while the CETR worsened to -2.09. However the remarkable drop in the losses provided the much needed motivation to the management and employees of IISCO with the losses at -3.26 percent.

Hence it is seen that the financial condition of IISCO was not very promising. The recent drop in the quantum of losses was an encouraging sign though and its merger with SAIL was expected to make a positive impact on its financial and operating performance.

Table 8.3.1: Pre-Merger Total Income of Indian Iron and Steel Company (1999-2004)

Figures in Rs Crore

Year	Total Income	Percentage Increase over Previous Year	Expenditure	Percentage Increase over Previous Year
1999-00	944.98			
2000-01	942.64	-0.25	1113.26	
2001-02	958.62	1.70	1123.64	0.932397
2002-03	959.70	0.11	1037.93	-7.62789
2003-04	1017.84	6.06	1101.47	6.1218
2004-05	1171.73	15.12	1063.805	-3.41952

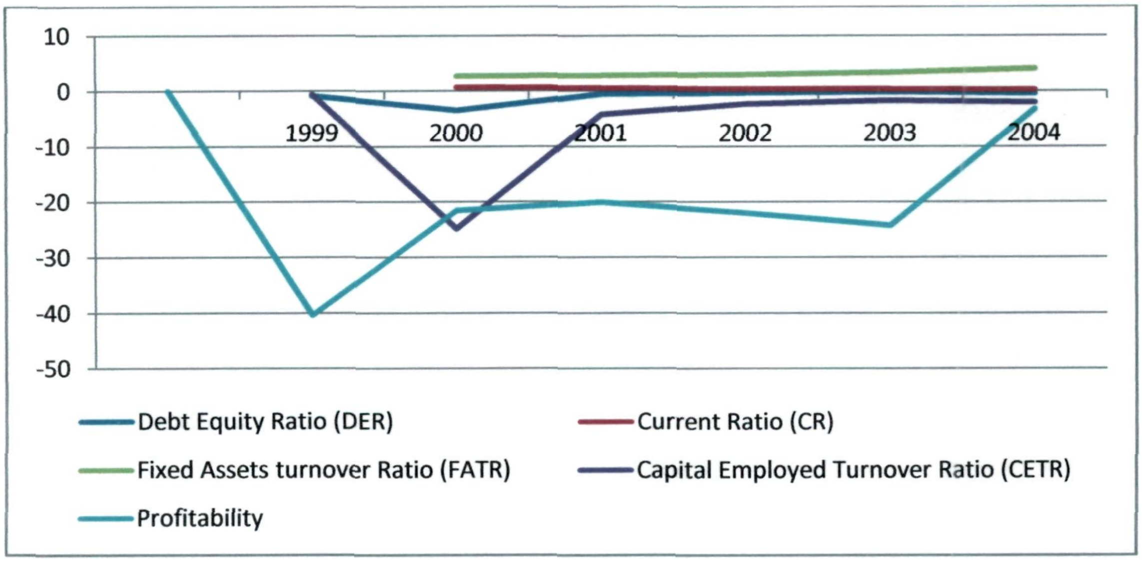
Source: Compiled and Calculated from Annual Report of IISCO from 1999 to 2004. Retrieved from http://www.business-beacon.com/kommon/bin/sr.php?kall=wcos&cocode=98859&type=s&tab=1010

Table 8.3.2: Pre Merger Ratio Analysis of Indian Iron and Steel Company (1999-2004)

Year	Interest Coverage Ratio (ICR)	Capital Employed To Turnover (CETR)	Debt Equity Ratio (DER)	Fixed Asset Turnover Ratio (FATR)	Profitability (%)
1999	-0.87487			-0.62112	-40.36
2000	-3.51185	0.704031	2.70858	-24.8325	-21.59
2001	-0.58916	0.53369	2.838169	-4.23981	-20.04
2002	-0.3341	0.352972	3.016312	-2.35816	-22.00
2003	-0.1752	0.337633	3.396876	-1.73028	-24.30
2004	-0.47203	0.228863	4.115449	-2.08786	-3.26

Source: Compiled and Calculated from Table 8.3.1 and Appendix 6

Figure 8.3.1: Pre Merger Ratio Analysis of IISCO



Source: Table 8.3.2

Testing of Hypotheses:

1. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger Profitability of IISCO and Post-merger Profitability of SAIL**
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger Profitability of IISCO and Post-merger Profitability of SAIL

Table 8.3.3 undertakes the analysis of the relation between the premerger profitability of IISCO with the Post Merger profitability of SAIL. The correlation coefficient (r) is at -0.71 which reflects a moderate degree of negative correlation. The coefficient of determination (r^2) at 0.5036 reflects that only half of the variance is explained by the explanatory variable. The regression equations show that for a unit change in X that is the pre-merger profitability of IISCO the pre-merger profitability is affected by 0.19 units. The constant is also high at 19.77 indicating the role of other variables. The t-value for four years of pre and Post Merger undertaken is 6.84 while the table value of t for v=6 at $t_{0.05}$ is 2.43. The calculated value being more than the table value leads to **rejection of the Null Hypothesis and acceptance of the Alternative Hypothesis.** Hence the values are statistically significant and the merger has an effect on the post-merger profitability.

However when six years of Pre Merger and four years of Post Merger are undertaken the value of t is calculated as 6.30 while the table value of t for v=8 at $t_{0.05}$ is 2.31. Again the calculated value is more than the table value which leads to **rejection of Null Hypothesis and acceptance of Alternative Hypothesis** implying the merger had an effect and the relation obtained is statistically significant.

2. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger CETR of IISCO and Post-merger CETR of SAIL**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger CETR of IISCO and Post-merger CETR of SAIL

Table 8.3.3 further explores the relation between the pre-merger CETR of IISCO and Post Merger CETR of SAIL. The correlation coefficient (r) is 0.31 showing moderate degree of positive correlation. The coefficient of determination (r^2) is 0.09 which shows that a very low proportion of variance in post-merger CETR of SAIL is explained by pre-merger CETR of IISCO. The regression equation depicts that a unit change in the pre-merger CETR of IISCO leads to just a 0.022 unit change in the post-merger CETR of SAIL. The constant or intercept is also not very high at 1.57. Further t-test is undertaken to test the statistical significance. The calculated value of t is 6.84 when four years before and after the merger are taken up. The table value of t for v=6 at $t_{0.05}$ is 2.43. As the calculated value is more than the table value the results are statistically significant and the Null hypothesis is rejected while the Alternative Hypothesis is accepted. Hence there is a relation between the Pre and Post Merger CETR. However when six years of Pre-Merger are undertaken it gives the t-value at 1.58 while the table value of t when v=8 at $t_{0.05}$ 2.31. The calculated value being less than the table value leads to the conclusion that the data is statistically insignificant and the Null Hypothesis is accepted against the Alternative Hypothesis stating that the merger has no effect on the Post Merger CETR.

Table 8.3.3: Pre and Post Merger Analysis of Profitability and CETR of IISCO and SAIL

Variables	Correlation Coefficient (r)	Coefficient of Determination (r^2)	Regression Equations	T-test
1. X= Pre-Merger Profitability of IISCO Y=Post-Merger Profitability of SAIL	=-0.71	0.5036	Y on X is Y=-0.19X +19.77	t=6.84* t=6.30**
2. X= Pre-Merger CETR of IISCO Y=Post-Merger CETR of SAIL	=0.31	0.093	Y on X is Y=0.022X+1.57	t=7.43* t=1.58**

*Four years of Pre and Post Merger undertaken
**Six years of Pre-Merger and Four years of Post Merger undertaken
Source: Compiled and Calculated from Tables 8.3.2 and 8.3.7

The financials of IISCO show that the company was running into losses at around 20 percent and it was only in 2001 that the rate of losses fell to -3.26 percent. The test of the two Hypothesis relating to the Pre Merger Profitability and CETR of IISCO with the Post Merger statistics of SAIL shows that the both the relations are statistically insignificant. The correlation coefficient (r) is however negative at -0.71 indicating the negative impact which was however only -0.19 units. IISCO was running into losses prior to the merger and consequently had a negative impact on the profitability of SAIL while the CETR had a positive impact on the CETR of SAIL. The correlation was of low degree but it should be kept in mind that the setting off of losses may have reduced profitability but at the same time the tax liability as well. In case of CETR the effect on CETR of SAIL is just 0.02 units.

b) Steel Authority of India Limited (SAIL)

In tune with the ongoing consolidation of the global Steel Industry SAIL integrated its subsidiary IISCO with the parent company with effect from 1 April 2005 under the 'Pooling of Interest Method' which resulted in the clubbing of assets, liabilities, reserves and surplus of IISCO with SAIL[8]. Thus it added another integrated plant to its fold and enhanced its size and scale of operation with the hope to benefit from the economies of scale and operations.

Pre-Merger Analysis

The year 1998-99 saw sales at Rupees 13138 crores against an expenditure of Rupees 11635 crores. ICR is very low at 0.17 while the WCTR is comfortable at 2.3 and CETR is low at 0.60. The proportion of debt is high 3.05 while losses were high at -12.32 percent. For the year 2000 the sales increased by 8.93 percent against a 12.67 percent increase in expenditure. ICR is very low at 0.04 while the WCTR is high at 5.03 and the CETR is at 0.85. The DER increases further to 3.17 while losses drop marginally -12.02 percent. The financial year 2001 saw the sales of the company decline by 1.4 percent and the expenditure by 8.89 percent. ICR is low at 0.56 but it is still a massive improvement over the previous years at 0.04 and working capital turnover ratio is at 5.26. The CETR is fairly low at 0.89 which is relatively the same with the previous years at 0.85. The DER at 3.42 which is higher than the previous years at 3.17 signifies the higher proportion of debt in the capital structure which is risky. The company is running into losses with profitability being negative at -51.67

percent. The steel industry was facing troubled times with an average growth of around just 4 percent in the last 6 years as compared to a 18 percent growth in previous years.

For the year 2002 interest coverage ratio at -0.09 put question marks on the ability of SAIL in fulfilling its interest payments. The WCTR improved to 6.87 and so did the CETR to 0.91 indicating better utilization. Efficiency in operations was reflected in reduction of losses to -12.63 percent although there was a reduction in sales by 4.19 percent and an increase in expenditure by 4.73 percent. Sales were recorded low at both the domestic and international market. Also the year 2001 was marked by a global recession that had an effect on the earnings. The sales of by-products, scraps and secondary products were also recorded at lower levels. The reduced cost of sales was mainly due to the cost control measures undertaken.

The year 2003 saw the sales increase by a whopping 24.54 percent and expenditure by 17.3 percent indicating a high level of trading. The ICR bettered to 0.76. The WCTR and CETR also improved significantly to 7.67 and 1.16 respectively giving positive signals about the financial position of the concern. The DER continued to be a cause of concern indicating higher risk proportion with it being at 6.5. It is seen that the concern almost breaks even with the net loss at 1.81 percent. The positive performance was attributed mainly to higher sales volumes and steel prices. Better product mix adopted also yielded the desired results. The cost control mechanism was also proving its effectiveness. Borrowings were also substituted by lower interest carrying instruments.

The year 2004 saw the sales increase by 26.49 percent against a 13.45 percent increase in expenditure. The intensive cost control and other efficiency measures undertaken by the management bore results with the ICR improving to 3.88, WCTR at 11.79 and CETR to 1.59. It reflected financial stability and efficient operations. The DER also lowered dramatically to 1.87 indicating a lower reliance on debt reducing the risk proportion. Most importantly a profit of 11.8 percent was registered confirming the financial health of the concern. The accumulated losses were wiped off. There was also a transfer from Bond Redemption Reserve. The recessionary trend being experienced since the last few years seemed to have ended with global demand of steel especially in Asia experiencing a sharp upward movement.

The year 2005 saw the sales increase by an even higher 33.93 percent while the expenditure increased by just 4.69 percent. The ICR improved significantly to 16.43

percent while the WCTR fell to 4.2. The CETR was the same at 1.59. However the profits improved comprehensively to a satisfying 23.9 percent. The DER at 0.58 indicated the borrowings were reduced to a limit where the net borrowings were lesser than the equity indicating greater reliance on owned funds.

Post-Merger Analysis

The year 2006 saw the sales fall by 2.32 percent and expenditure increase by 17.52 percent. The ICR declined slightly to 13.07 and WCTR to 3.48. The CETR and the DER also went down slightly to 1.59 and 0.58 respectively. The rate of profitability also dropped to 14.4 percent. The lowering of profitability is attributed to the increase in the price of coking coal, demurrage rates and freight rates. The lowered prices of steel did not help the cause either. However the company continued to have higher production.. In the third consecutive year The Institute of Cost and Works Accountants of India (ICWAI) under its National award for excellence in Cost Management-2005, conferred upon the Company "Good Performance Award" as a recognition to Company's efforts in the areas of cost management and attainment of cost consciousness in the organisation. The year 2007 saw the sales rise by 21.76 percent against a 12 percent rise in expenditure. The ICR more than doubled to 29.29 indicating higher ability to meet interest payments with the DER falling further to 0.24. The WCTR fell slightly to 2.82 and CETR to 0.24. However profitability was recorded at a higher 18.28 percent highlighting the operational efficiency of the company on the foundations of modernization and expansion which were undertaken on the basis of the various mergers. The higher capacity utilization recorded at 114 percentwas indeed phenomenal.

The year 2008 saw the sales notch up by another 16.46 percent and expenditure by 15.66 percent. The ICR rose to a very high of 46.39 while DER reduce to 0.13 percent indicating that the concern could raise debt but it was not doing the same. A WCTR at 2.7 indicated an efficient use of the working capital as did the CETR at 1.6. The year saw production levels break new records with profitability rising by another 19.08 percent. The expansion plans of the entity were on course with internal resources of funds available to fund the various modernization, development and expansion plans. The demand in the market was also favourable and it was ably supported by concrete cost cutting measures and efficient operations. The MPS rose by 63.72 percent to Rs 185 in 2008. The year 2009 saw the sales rise by another 9.22 percent against a 21.29

percent increase in expenditure. The figures put a question mark on the cost cutting programs that were implemented at SAIL. With the increase in DER to 0.27 the ICR declined to 2.18. The WCTR and CETR did not change much at 2.18 and 1.41 respectively. The profitability however dropped to 14.31. The entire economy was under the grip of global recession due to which a fall in profits was anticipated. However, the beginning of the year saw sharp rise in prices and demand for steel before sluggishness was reported in economies worldwide due the economic crisis that had erupted in the USA. The company continued to register profits due to the strategic measures adopted by the management early in the year.

Table 8.3.4: Pre-Merger and Post-Merger Analysis of Sales of SAIL (1999-2009)

Figures in Rupees crore

Pre-Merger			Post-merger		
Year	**Sales**	**Percentage Increase over Previous Year**	**Year**	**Sales**	**Percentage Increase over Previous Year**
1998-99	13138		2005-06	27860	-2.32444
1999-00	14311	8.93	2006-07	33923	21.76238
2000-01	14110	-1.40451	2007-08	39508	16.46376
2001-02	13519	-4.18852	2008-09	43150	9.218386
2002-03	16837	24.54324			
2003-04	21297	26.48928			
2004-05	28523	33.92966			

Source: Compiled and Calculated from Annual Report of SAIL from 1999 to 2009. Retrieved from www.sail.co.in

Table 8.3.5: Pre and Post-Merger Analysis of Expenditure of SAIL (1999-2009)

Figures in Rupees crore

	PRE-MERGER			POST-MERGER	
Year	**Expenditure**	**Percentage Increase over Previous Year**	**Year**	**Expenditure**	**Percentage Increase over Previous Year**
1998-99	11635	NA	2005-06	20479	17.5198
1999-00	13109	12.67	2006-07	22957	12.1002
2000-01	11943	-8.89465	2007-08	26553	15.66407
2001-02	12508	4.730805	2008-09	32208	21.29703
2002-03	14672	17.30093			
2003-04	16645	13.44738			
2004-05	17426	4.6921			

Source: Compiled and Calculated from Annual Report of SAIL from 1999 to 2009 Retrieved from www.sail.co.in

Table 8.3.6: Pre- Merger Ratio Analysis of SAIL (1999-2005)

Pre-Merger					
Year	**Interest Coverage Ratio (ICR)**	**Working Capital Turnover Ratio (WCTR)**	**Capital Employed To Turnover (CETR)**	**Debt Equity Ratio (DER)**	**Profitability (%)**
1998-99	0.17	2.3	0.60	3.05	-12.32
1999-00	0.04	5.03	0.85	3.17	-12.02
2000-01	0.56	5.26	0.89	3.42	-51.67
2001-02	-0.09	6.87	0.91	6.23	-12.63
2002-03	0.76	7.67	1.16	6.5	-1.81
2003-04	3.88	11.79	1.59	1.87	11.8
2004-05	16.43	4.2	1.59	0.58	23.9

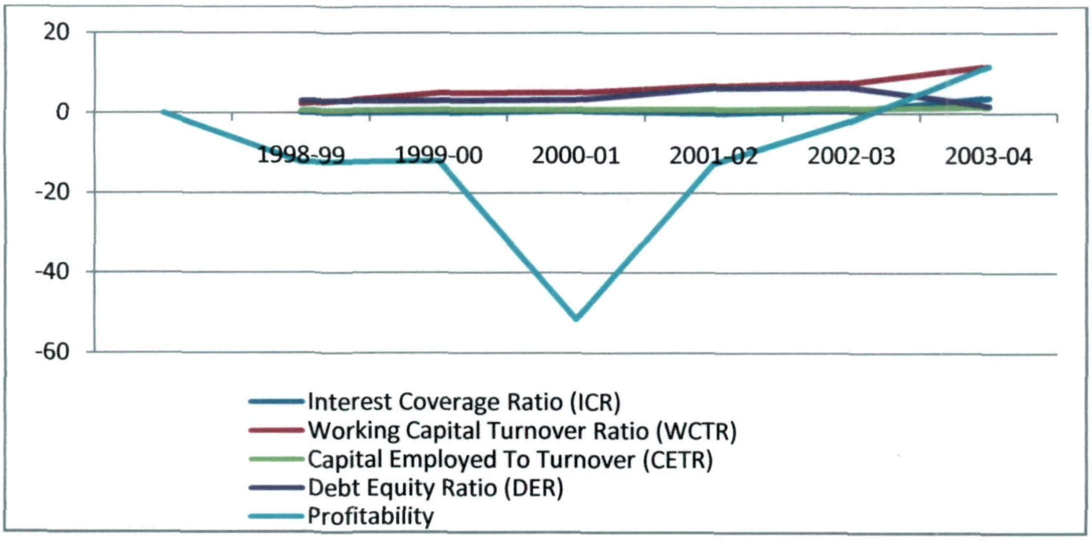
Source: Compiled and Calculated from Table 8.3.4, Appendix 3 and Appendix 4

Table 8.3.7: Post- Merger Ratio Analysis of SAIL (2006-2009)

Post-Merger					
Year	**Interest Coverage Ratio (ICR)**	**Working Capital Turnover Ratio (WCTR)**	**Capital Employed To Turnover (CETR)**	**Debt Equity Ratio (DER)**	**Profitability (%)**
2005-06	13.07	3.48	1.48	0.35	14.4
2006-07	29.29	2.82	1.54	0.24	18.28
2007-08	46.39	2.7	1.6	0.13	19.08
2008-09	29.59	2.18	1.41	0.27	14.31

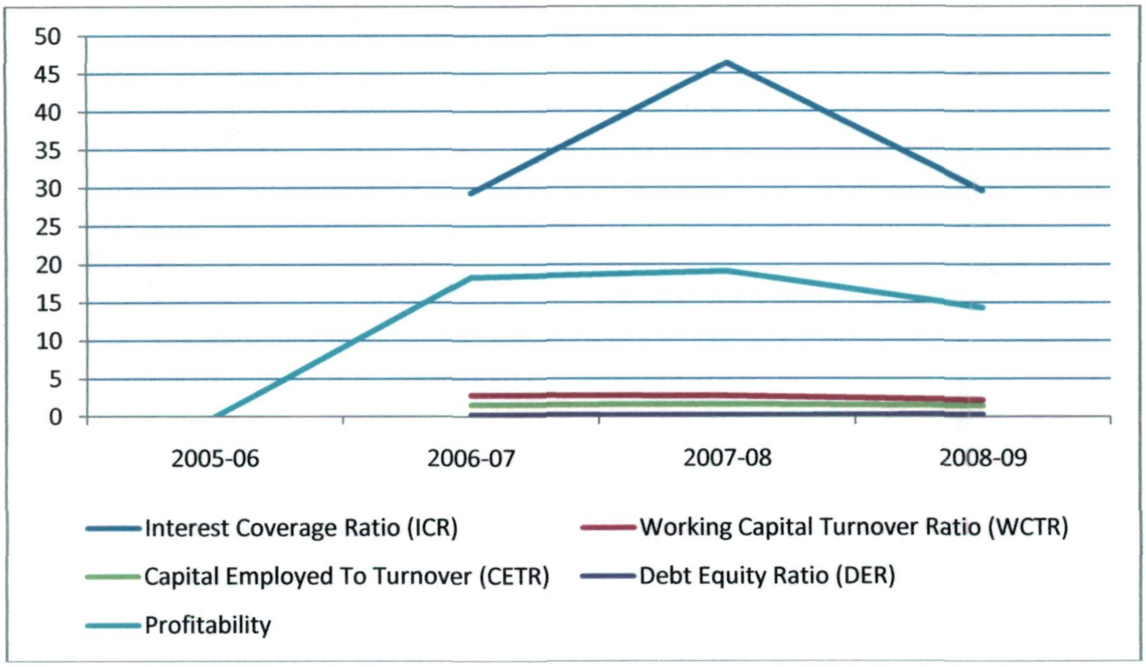
Source: Compiled and Calculated from Table 8.3.4, Appendix 3 and Appendix 4

Figure 8.3.2: Pre- Merger Ratio Analysis of SAIL (for merger with IISCO)



Source: Table 8.3.6

Figure 8.3.3: Post Merger Ratio Analysis of SAIL (for merger with IISCO)



Source: Table 8.3.7

Testing of Hypotheses:

Table 8.3.8 evaluates the Pre and Post Merger Analysis of Profitability, CETR and ICR. The Hypotheses studied are evaluated below.

1. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger Profitability of SAIL**
   H_a (Alternative Hypothesis) = There is a relation between the Pre and Post-merger Profitability of SAIL

The correlation coefficient (r) between the Pre and Post Merger profitability is 0.01 which signifies a low degree of positive correlation. The coefficient of determination (r^2) is very low at 0.0001 which shows that a very small part of variance in Post Merger profitability is explained by the Pre Merger profitability. The regression equation Y on X shows that for a unit change in X that is the pre-merger profitability of SAIL the Post Merger profitability is affected by 0.001 units. The constant is high at 16.51 indicating the role of other factors. The calculated value of t is 1.4 when four years of pre and Post Merger are undertaken. The table value of t for **$v=6$ at $t_{0.05}$ is 2.45.** The calculated value is less than the table value so the data is regarded as statistically insignificant. The **Null Hypothesis is accepted and the Alternative Hypothesis is rejected.** It is concluded that the merger has no effect in determining the profitability and there is no relation between the pre and Post Merger values.

The value of t is further calculated by taking in to consideration thirteen years of Pre Merger and four years of Post Merger. The value of t comes to be 1.96 while the table value of t for v=15 at $t_{0.05}$ is 2.13. Here again the calculated value is less than the table value. Hence in the longer run also the data is statistically insignificant and the pre-merger values do not have a relation with the Post Merger values leading to **the acceptance of the Null Hypothesis and rejection of the Alternative Hypothesis.**

2. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger CETR of SAIL**
   H_α (Alternative Hypothesis) = There is a relation between the Pre and Post-merger CETR of SAIL

Table 8.3.8 further investigates the relation between the pre and Post Merger CETR of SAIL. The correlation coefficient (r) is 0.06 indicating a low degree of positive correlation. The coefficient of determination (r^2) is 0.0036 showing that a very small part of the variation in CETR is explained by the merger. The Regression equation Y on X shows that for every one unit change in X that is the pre-merger CETR the Post Merger CETR is affected by 0.14 units which explains a very small part of the variation. Further the t-test undertaken gives the value of t at 1.15 when four years of pre and Post Merger are undertaken. The table value of t when v=6 at $t_{0.05}$ is 2.45. The calculated value being lesser than the table value leads to **rejection of the Alternative Hypothesis and acceptance of the Null Hypothesis.** Hence it is believed that the data is statistically insignificant and the merger does not have an effect on the CETR value after the merger.

Further when the values are calculated for thirteen years of pre-merger and four years of Post Merger, the t value is 0.15. The table value of t when v=15 at $t_{0.05}$ is 2.13. Here again the calculated value is lesser than the table value leading to the interpretation that the data is statistically insignificant in the longer run as well. **Null Hypothesis is accepted and the Alternative Hypothesis is rejected** and it is concluded that the merger does not have an effect in the movement of the CETR.

3. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post-merger Profitability of SAIL**
   H_α (Alternative Hypothesis) = There is a relation between the Pre and Post-merger Profitability of SAIL

Table 8.3.8 presents the relation between the Pre and Post Merger ICR as well. The correlation coefficient (r) comes out to be 0.21 indicating a low degree of positive correlation. The coefficient of determination (r^2) is 0.044 which shows that a very minimum percentage of the variance is explained by the merger. The regression equation further shows that for every one unit change in pre-merger ICR of SAIL that is X, the Post Merger ICR or Y is affected by 0.38 units. The value of intercept is very high at 27.60 indicating a strong play of other factors in the movement of the ICR. The value of t is calculated as 3.12 when four years of pre and Post Merger are undertaken. The table value of t for v=6 at $t_{0.05}$ is 2.45. The calculated value being more than the table value leads to the conclusion that the relation is statistically significant and the **Null Hypothesis is rejected while the Alternative Hypothesis is accepted.** Hence the merger has an effect on the movement of ICR. When the t value is calculated taking into account thirteen years of Pre Merger and four years of Post Merger the value of t is 6.76 while the table value of t when v=15 at $t_{0.05}$ is 2.13. Hence in the longer run also the relation is statistically significant and the **Alternative Hypothesis is accepted against the Null Hypothesis**. Hence the merger has an effect on the movement of the ICR.

Table 8.3.8: Pre and Post Merger Analysis of Profitability, CETR and ICR of SAIL

Variables	***Correlation Coefficient (r)**	***Coefficient of Determination (r^2)**	***Regression Equations**	**T-test**
1. X= Pre-Merger Profitability of Sail Y=Post-Merger Profitability of SAIL	=0.01	0.0001	Y on X is Y=0.001X+16.51	t=1.4* t=1.96**
2. X= Pre-Merger CETR of SAIL Y=Post-Merger CETR of SAIL	=0.06	0.0036	Y on X is Y=0.014X+1.49	t=1.15* t=0.15**
3. X= Pre-Merger ICR of SAIL Y=Post-Merger ICR of SAIL	=0.21	0.044	Y on X is Y=0.38X+27.60	t=3.12* t=6.76**

*Four Years of Pre and Post Merger Undertaken
**Thirteen Years of Pre Merger and Four Years of Post-Merger Undertaken
Source: Compiled and Calculated from Table 8.3.6 and Table 8.3.7

Table 8.3.9 deals with the study of the relation between the Profitability and Market Price per Share of SAIL. It aims to establish the relationship between the profitability and MPS before and after the merger.

4. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger Profitability and Pre-merger MPS of SAIL**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger Profitability and Pre-merger MPS of SAIL

Table 8.3.9 studies the relation between the Pre Merger profitability and MPS of SAIL. The correlation coefficient (r) is at 0.75 indicating a high level of positive correlation while the coefficient of determination (r^2) is 0.563 indicating that a high level of variance is explained by the variables. The equation X on Y shows that for every one unit change in Y that is the Pre-merger MPS of SAIL the Pre-merger Profitability is affected by 0.85 units. The intercept is also high at -24.44 indicating the effect of other factors, the equation Y on X shows that for every one unit change in X there is a corresponding 0.67 unit's change in Y that is the Pre-merger MPS. The data is further analyzed for statistical significance for the purpose of which t-test is done. The t value comes out to be 1.82. The table value of t when v=8 at $t_{0.05}$ is 2.45. As the calculated value is less than the table value the relation is not statistically significant and it leads to **acceptance of Null Hypothesis and rejection of Alternative Hypothesis**. Hence it is concluded that there is no relation between the Pre-merger MPS and Profitability of SAIL.

5. **H_0 (Null Hypothesis) = There is no relation between the Post Merger Profitability and Post-merger MPS of SAIL**
   H_a (Alternative Hypothesis) = There is a relation between the Post Merger Profitability and Post-merger MPS of SAIL

Table 8.3.9 examines the relation between the Profitability and MPS of SAIL after the merger. The correlation coefficient (r) is 0.83 signaling a high level of positive correlation while the coefficient of determination (r^2) is 0.69 indicating that a large percentage of variation in variables is explained. The regression equation X on Y shows that for every unit change in Y that is the Post Merger MPS the Post Merger profitability is affected by 0.05 units while the intercept is high at 11.04 indicating the role of other factors. The Equation Y on X shows that for every one unit change in X that is the Post-Merger Profitability of SAIL there is 15.01 units change in Y that is the Post Merger MPS of SAIL. The constant is extremely high at -128.64 indicating a strong play of other factors. The t value is calculated as 4.51 as while the table value of t for v=8 at $t_{0.05}$ is 2.45. The calculated value being more than the table value leads to the conclusion that the relation is statistically significant and the **Null Hypothesis is rejected while the Alternative Hypothesis is accepted.** Hence there is a relation between the MPS and Profitability of SAIL after the merger.

Table 8.3.9: Pre and Post Merger Analysis of MPS and Profitability of SAIL

Variables	Correlation Coefficient (r)	Coefficient of Determination (r^2)	Regression Equations	T-test
4. X=Pre-Merger Profitability of SAIL Y=Pre Merger MPS of SAIL	=0.75*	0.5625*	X on Y is X=0.85Y-24.44* Y on X is Y=0.67X+25.24*	1.822*
5. X=Post-Merger Profitability of SAIL Y=Post Merger MPS of SAIL	=0.83**	0.6889**	X on Y is X=0.05Y+11.04** Y on X is Y=15.01X-128.64**	4.51**

*Six Years of Pre Merger taken
**Four Years of Post Merger taken
Source: Compiled and Calculated from Table 8.3.6, Table 8.3.7 and Appendix 5

Table 8.3.10 makes an attempt to study the impact of the merger on the MPS and EPS of SAIL.

6. H_0 (Null Hypothesis) = There is no relation between the Pre Merger MPS and Post-merger MPS of SAIL
H_a (Alternative Hypothesis) = There is a relation between the Pre Merger MPS and Post-merger MPS of SAIL

From Table 8.3.10 it is discernible that the correlation coefficient (r) between the Pre and Post Merger MPS is 0.52 which reflects a moderate degree of Positive correlation. The coefficient of determination (r^2) is 0.267 indicating that only a quarter of the proportion of movement of the variable is explained by merger. The regression equation Y on X shows that for every unit change in X that is the pre-merger MPS the Post Merger MPS is affected by 0.2 units. The constant is at 13.6 signifying that when the slope is zero the Y intercept is affected by 13.6 units indicating the existence of other factors. When the values are tested for statistical significance it gives the t value at 3.73 when four years of pre and Post Merger are undertaken. The value of t when v=6 at $t_{0.05}$ is 2.78. The calculated value is more than the table value which leads to the conclusion that the relation is statistically significant. The **Null Hypothesis is rejected and the Alternative Hypothesis is accepted** stating the merger has an effect on the movement of pre and Post Merger MPS.

Further when the value of t when six years of pre-merger and four years of Post Merger are undertaken gives the t value at 4.13. The table value of t when v=8 at $t_{0.05}$ is 2.45. The calculated value being more than the table value leads to the **acceptance of the Alternative Hypothesis again**. It is concluded that the merger has an effect on the movement of MPS in the longer run as well. Hence the relation is found to be statistically significant.

7. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger EPS and Post-merger EPS of SAIL**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger EPS and Post-merger EPS of SAIL

The next Hypothesis examined in Table 8.3.10 is the relation between the Pre and Post Merger EPS of SAIL. The correlation coefficient (r) is 0.11 reflecting a low degree of positive correlation while the coefficient of determination (r^2) is 0.012 showing that a minor variation in the movement is explained by merger. The regression equation shows that for every unit change in X that is the Pre-merger EPS the Post Merger EPS is affected by 0.19 units while the constant is high at 114.11 indicating the effect of other factors. The t-value for four years of Pre and Post Merger is 3.49 while the table value of t for v=6 at $t_{0.05}$ is 2.78. The calculated value being more than the table value gives the inference that the data is statistically significant and the merger has an effect in the movement of EPS. When the t value is calculated for six years of Pre Merger and four years of Post Merger it comes out to be 2.60 while the table value of t for v=8, at $t_{0.05}$ is 2.45. The calculated value is again higher than the table value leading to the conclusion that the relation is statistically significant and the merger has an effect in the movement of the Pre and Post Merger EPS. **The Null Hypothesis is rejected while the Alternative Hypothesis is accepted.**

Table 8.3.10: Pre and Post Merger Analysis of MPS and EPS of SAIL

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
6. X=Pre-Merger MPS of SAIL Y=Post Merger MPS of SAIL	0.517	0.267	Y on X is Y=0.2X+13.6	t=3.73* t=4.13**
7. X=Pre-Merger EPS of SAIL Y=Post Merger EPS of SAIL	0.11	0.012	Y on X is Y=0.19X+114.11	t=3.49* t=2.60**

*Four Years of Pre and Post Merger undertaken
**Six years of Pre-merger and Four years of Post Merger taken
Source: Compiled and Calculated from Appendix 5

8. H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profit Margin
H_a (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profit Margin

9. H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profit Rate
H_a (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profit Rate

Table 8.3.11 presents a detailed analysis as regards the pre and Post Merger Profit Rate and Profit margin for IISCO and SAIL. The Pre-merger Profit Margin for IISCO is very low at -21.925 while that for SAIL is also negative at -0.012. The Post-Merger Profit Margin is healthy at 0.165 signifying that the post-merger performance is much better as compared to that of the pre-merger. The Profit Rate of IISCO before the merger is -0.1192 while that for SAIL is -0.172. Both are negative and very low. Howëver the Post Merger Profit Rate of SAIL is a positive 0.153 highlighting again that the post-merger operations are much better than the Pre-Merger in terms of the Profit Rate as well. The percentage increase in the Profit Marin for SAIL is exceptionally high at 1505.96 percent while for the Profit Rate it is 189.21 percent. Hence both the financial and operating efficiency increased manifold after the merger.

Table 8.3.11: Pre and Post Merger Profit Rate and Profit Margin for SAIL and IISCO

	Net Sales Profit Margin= $\frac{\text{PAT.}}{\text{NS}}$			Total Assets Profit Rate= $\frac{\text{PAT.}}{\text{TA}}$		
	Pre-merger Average	**Post-merger Average**	**Percentage Change**	**Pre-merger Average**	**Post-merger Average**	**Percentage Change**
a) IISCO	-21.925	NA		-0.11918	NA	
b) SAIL.	-0.01175	0.1652	1505.96	-0.1715	0.153	189.21

Source: Compiled and Calculated from Table 8.3.1, Table 8.3.2, Table 8.3.4, Appendix 2, Appendix 4 and Appendix 6

SAIL was making profits since 2004 and the trend continued after the merger as well. However the testing of Hypothesis shows that it's only the relation between the Pre and Post Merger ICR which is statistically significant. However the degree of correlation is low at 0.21. The Pre Merger analysis of Profitability and MPS depicts that the relation between the two parameters is statistically insignificant. However Post Merger the relation is statistically significant and there is a high degree of positive correlation. The Profitability is affected by 0.05 units for a unit change of a unit of MPS while MPS is changed by 15.01 units change for a change in profitability. The intercept is high at -128.62. The hypothesis testing the Pre and Post Merger MPS and EPS shows that there is an effect of the merger on the two variables. For MPS the relation is moderate at 0.52 while for EPS it is of a low degree at 0.11. It is interesting in the light that the Pre Merger profitability did not have a statistically significant relation with the Post Merger profitability. The analysis of Profit Margin and Profit Rate show significant improvement in the financial and operating efficiency. The post-merger Profit Margin increased by 1505.96 percent, while the Post Merger Profit Rate increased by 189.21 percent. Hence the merger did positively affect the financials of SAIL and there were also benefits in terms of greater size and production capabilities.

8.4 ***Indian Metals and Ferro Alloys (IMFA) and Indian Charge Chrome Limited (ICCL) (2005-06) : Pre and Post Merger Performance Assessment***

a) **Indian Charge Chrome Ltd (ICCL)**

Indian Charge Chrome Limited was established in 1983 and was a subsidiary of Indian Metals and Ferro Alloys (IMFA). It was subsequently merged with its parent company in October 2006. The merger enabled IMFA to consolidate itself and become the largest fully integrated producer of Ferro alloys in the country and it was done under the scheme of debt restructuring. The merger ratio was fixed as 1 share of IMFA for every 14 shares of ICCR.[9]

Pre-Merger Analysis

The analysis in Tables 8.4.1 and 8.4.2 reveals the financial condition of Indian Charge Chrome Limited before the merger with Indian Metals and Ferro Alloys materialized. The operating income of Indian Charge Chrome limited was Rs 164.29 crore and cost of sales was Rupees 132.69 crores for the year 2001. The ICR and FATR were very low at 0.005 and 0.55 respectively raising questions about the financial conditions and operating efficiency of the firm. The CR was reasonable at 1.08 while the net worth was negative with the DER at -0.28. The concern was however running into heavy losses with the loss at -191.67 percent. The year 2002 saw the operating income fall by -6.85 percent while the cost of sales rose by 14.30 percent reflecting inefficiency in operations. The ICR and CR fell further to -0.09 and 0.45 respectively. The FATR was relatively same at 0.57 while the losses ballooned to -240.83 percent. DR continued to be negative at -0.17. The year 2003 saw operating income rise by 18.22 percent and the cost of sales rise by 9.91 percent. ICR, CR and FATR were all relatively same at -0.05, 0.35 and 0.77 respectively. There was not much improvement at the level of profitability which stood at a disturbing figure of -213.06 percent. For 2004 the operating income rose by an impressive 29.58 percent against a 4.28 percent increase in cost of sales. DER didn't change much at -0.14. There was improvement in ICR, CR, and FATR which notched up to 0.26, 0.58 and 0.88 respectively. The net loss also reduced to a considerable extent to -30.06 percent.

The year 2005 saw the sales surge by 33.86 percent against a 34.11 percent increase in cost of sales. The DER continued to be a cause for worry at -0.19. The ability to meet financial expenses improved with the ICR improving to 0.80. The CR also moved up to 0.78 and FATR to 1.05. The losses dropped down drastically with the losses at -1.42 percent.

Table 8.4.1: Pre-Merger Operating Income and Cost of Sales of Indian Charge Chrome Ltd (2001-2005) Figures in Rs Crore

Year	Operating Income	Percentage Increase over previous year	Cost of Sales	Percentage Increase over previous year
2001	164.29		132.69	
2002	153.04	-6.85	151.67	14.30
2003	180.92	18.22	166.7	9.91
2004	234.43	29.58	173.84	4.28
2005	313.81	33.86	233.13	34.11

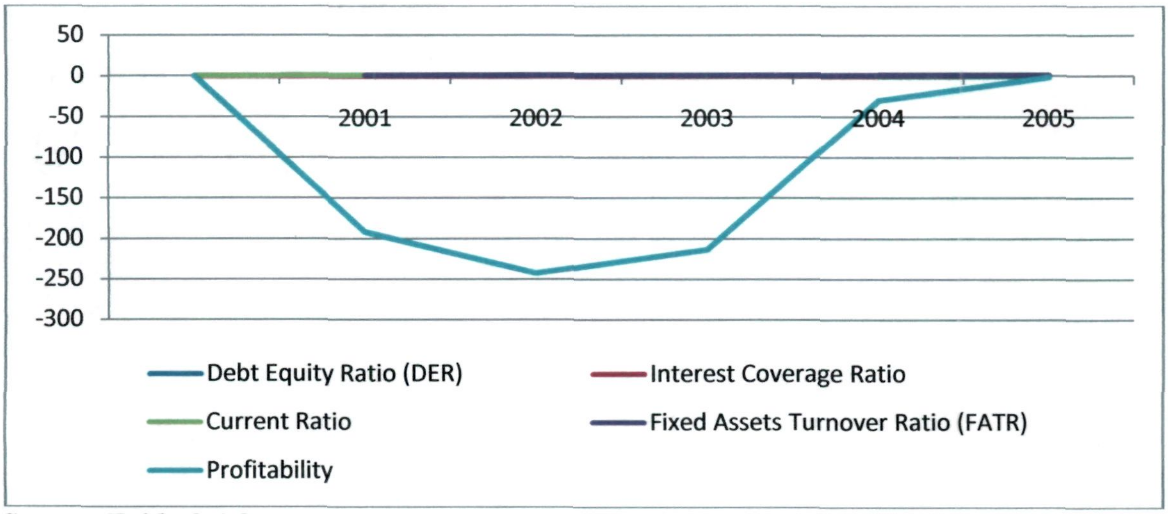
Source: Compiled and Calculated from Annual Reports of Indian Chrome Charge Limited from 2001 to 2005. Retrieved from http://money.rediff.com/companies/indian-charge-chrome-ltd/14520004/ratio

Table 8.4.2: Pre-Merger Ratio Analysis of Indian Charge Chrome Ltd (2001-2005)

Year	Debt Equity Ratio (DER)	Interest Coverage Ratio (ICR)	Current Ratio (CR)	Fixed Assets Turnover Ratio (FATR)	Profitability (%)
2001	-0.28	0.005	1.08	0.55	-191.67
2002	-0.17	-0.09	0.45	0.57	-242.28
2003	-0.13	-0.05	0.35	0.77	-213.06
2004	-0.14	0.26	0.58	0.88	-30.06
2005	-0.19	0.80	0.78	1.05	-1.42

Source: Compiled and Calculated from Annual Reports of Indian Chrome Charge Limited from 2001 to 2005. Retrieved from http://money.rediff.com/companies/indian-charge-chrome-ltd/14520004/ratio

Figure 8.4.1: Pre-Merger Ratio Analysis of Indian Charge Chrome Ltd



Source: Table 8.4.2

In Table 8.4.3 the Researcher studies the relation between the Pre Merger Profitability, CETR and FCCR of Indian Charge Chrome Limited (ICCL) with Indian Metals and Ferro Alloys Limited (IMFA).

1. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger Profitability of Indian Chrome Charge Limited (ICCL) and Post -merger Profitability of Indian Metals and Ferro Alloys (IMFA).**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger Profitability of Indian Chrome Charge Limited (ICCL) and Post -merger Profitability of Indian Metals and Ferro Alloys (IMFA).

The relation between the Pre Merger profitability of Indian Chrome Charge Limited (ICCL) and Post Merger Profitability of Indian Metals and Ferro Alloys Limited (IMFA) gives the correlation coefficient (r) at 0.89 which is a high degree of positive correlation. The coefficient of determination (r^2) is worked out as 0.7921 which indicates that a high percentage of variance is explained by this relation. The regression equation Y on X indicates that for every unit change in X that is the Pre Merger profitability of ICCL there is 0.08 units change in Y that is the Post Merger profitability of IMFA. The constant is high at 20.53 indicating the effect of other factors on Y. The t test is calculated as 2.13 for years of Pre and Post Merger. The table value of t when v=6 at $t_{0.05}$ is 2.48. The calculated value is less than the table value which leads **to rejection of Alternative Hypothesis and acceptance of the Null Hypothesis.** The relation is not significant statistically between the pre and Post Merger values. Further when the t-value is calculated for five years of Pre Merger and four years of Post Merger it comes out to be 2.59. The table value of t when v=7 at $t_{0.05}$ is 2.37. The calculated value is more than the table value. Hence the relation is statistically significant and it leads to **acceptance of Alternative Hypothesis and rejection of Null Hypothesis.**

2. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger FATR of Indian Chrome Charge Limited (ICCL) and Post -merger FATR of Indian Metals and Ferro Alloys (IMFA).**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger FATR of Indian Chrome Charge Limited (ICCL) and Post -merger FATR of Indian Metals and Ferro Alloys (IMFA).

The next Hypothesis examines the relationship between the Pre Merger FATR of Indian Chrome Charge Limited (ICCL) and Post Merger FATR of Indian Metals and Ferro Alloys Limited (IMFA). The correlation coefficient (r) comes out as 0.90 which is a very high degree of positive correlation. The coefficient of determination (r^2) is also high at 0.81 indicating that a high degree of variation is determined by this relationship. The regression equation Y on X shows that for every one unit change in X that is the Pre Merger FATR of Indian Chrome Charge Limited (ICCL) the Post Merger FATR of Indian Metals and Ferro Alloys Limited (IMFA) is affected by 1.45 units. The intercept is low at 0.46. The value of t is calculated as 4.34 when four years of pre and Post Merger are undertaken. The table value of t when v=6 at $t_{0.05}$ is 2.45. The calculated value is more than the table value which leads to the conclusion that the relation is statistically significant. **The Null Hypothesis is rejected while the Alternative Hypothesis is accepted.** Hence there is a relation between the Pre and Post Merger values. Further when the t value is calculated for five years of Pre Merger and three years of Post Merger it comes out to be 4.95. The table value of t when v=7 at $t_{0.05}$ is 2.37. Here again the calculated value is more than the table value due to which it is inferred that the relation is statistically significant. **The Null Hypothesis is rejected while the Alternative Hypothesis is accepted.** There is a relation between the Pre and Post Merger FATR.

3. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger ICR of Indian Chrome Charge Limited (ICCL) and Post -merger ICR of Indian Metals and Ferro Alloys (IMFA).**
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger ICR of Indian Chrome Charge Limited (ICCL) and Post -merger ICR of Indian Metals and Ferro Alloys (IMFA).

The above Hypothesis examines the effect of merger on the ICR before and after the merger. The correlation coefficient (r) between the Pre Merger ICR of Indian Chrome Charge Limited (ICCL) and Post Merger ICR of Indian Metals and Ferro Alloys Limited (IMFA) is calculated as 0.97 which is a very high degree of positive correlation. The coefficient of determination (r^2) comes out to be 0.9431 which signifies that almost all the variance is explained by this relationship. The regression equation gives the cause and effect relationship where every unit change in X that is the Pre Merger ICR of Indian Chrome Charge Limited (ICCL) leads to 9.16 units change in Y that is the Post Merger ICR of Indian Metals and Ferro Alloys Limited (IMFA). The intercept is at 2.32. The t value is calculated as 2.15 when four years of Pre and Post Merger are undertaken. The table value of t when v=6 at $t_{0.05}$ is 2.48. The calculated value being less than the table value leads to **rejection of the Alternative Hypothesis and acceptance of the Null Hypothesis.** Hence the relation is statistically insignificant and there is no relation between the Pre and Post Merger ICR.

The t value is further calculated for five years of Pre Merger and four years of Post Merger. It gives the t value at 2.48. The table value of t when v=7 at $t_{0.05}$ is 2.37. The calculated value is more than the table value. Hence the **Null Hypothesis is accepted and the Alternative Hypothesis is accepted.** There is a relation between the Pre and Post Merger values of ICR.

Table 8.4.3: Pre and Post Merger Analysis of Profitability, FATR and ICR for ICCL and IMFA

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
1. X= Pre-Merger Profitability of Indian Chrome Charge Limited Y=Post-Merger Profitability of Indian Metals and Ferro Alloys	=0.89	0.7921	Y on X is Y=0.08X+20.53	t=2.13* t=2.59**
2. X= Pre-Merger FATR of Indian Chrome Charge Limited Y=Post-Merger FATR of Indian Metals and Ferro Alloys	=0.90	0.81	Y on X is Y=1.45X+0.46	t=4.34* t=4.95**
3. X= Pre-Merger ICR of Indian Chrome Charge Limited Y=Post-Merger ICR of Indian Metal and Ferro Alloys	=0.97	0.9431	Y on X is Y=9.16X+2.32	t=2.15* t=2.48**

*Four Years of Pre and Post Merger Undertaken
**Five Years of Pre Merger and Four Years of Post-Merger Undertaken
Source: Compiled and Calculated from Table 8.4.2 and Table 8.4.8

Table 8.4.4 explores the relationship between the Pre Merger EPS of Indian Chrome Charge Limited (ICCL) and Post Merger EPS of Indian Metals and Ferro Alloys Limited (IMFA).

4. H_0 (Null Hypothesis) = There is no relation between the Pre Merger EPS of Indian Chrome Charge Limited (ICCL) and Post -merger EPS of Indian Metals and Ferro Alloys (IMFA).
H_a (Alternative Hypothesis) = There is a relation between the Pre Merger EPS of Indian Chrome Charge Limited (ICCL) and Post -merger EPS of Indian Metals and Ferro Alloys (IMFA).

The correlation coefficient (r) comes out as 0.893 indicating high degree of positive correlation. The coefficient of determination (r^2) is calculated as 0.797 showing that a high degree of variance in the variables is explained by this relationship. The regression equation Y on X shows that for every unit change in X that is the Pre Merger EPS of Indian Chrome Charge Limited (ICCL) there is 1.38 units change in Y that is the Post Merger ICR of Indian Metals and Ferro Alloys Limited (IMFA). The value of intercept is very high at 97.37 indicating the effect of other factors. The t value is calculated as 2.68 for four years of Pre and Post Merger. The table value of t when v=6 at $t_{0.05}$ is 2.48. The calculated value is more than the table value which leads to **acceptance of Alternative Hypothesis and rejection of Null Hypothesis.** Hence the relation is statistically significant and there is a relationship between the pre and Post Merger values of EPS. The t value for five years of Pre Merger and four years of Post Merger is calculated as 3.15 while the table value of t when v=7 at $t_{0.05}$ is 2.37. Here again the calculated value is more than the table value which leads to **acceptance of Alternative Hypothesis and rejection of Null Hypothesis.** The relation is statistically significant.

Table 8.4.4: Pre and Post Merger Analysis of EPS of ICCL and IMFA

Variables	***Correlation Coefficient (r)**	***Coefficient of Determination (r^2)**	***Regression Equations**	****T-test**
4. X=Pre-Merger EPS of Indian Chrome Charge Ltd. Y=Post Merger EPS of Indian Metals and Ferro Alloys Ltd	0.893	0.7974	Y on X is Y=1.38X+97.37	t=2.68* t=3.15**

*Four years of Pre and Post Merger undertaken
**Five years of Pre-merger and Four years of Post Merger taken
Source: Compiled and Calculated from Appendix 16 and Appendix 18

The Pre Merger figures of Indian Chrome Charge Limited (ICCL) show that the company was running into losses since 2001 but the volume of losses had considerably come down till 2005 to -1.42 percent. The test of Hypotheses reveals that the Profitability and ICR of ICCL had a relation with the Post Merger figures of IMFA only in the longer run. The FATR of ICCL had a statistically significant relation with the FATR of IMFA both in the shorter and longer run. The two variables had a very high degree of positive correlation at 0.91. The positive effect that the merger had on the operational efficiency was obvious. Even the EPS of ICCL had statistically significant relation with that of IMFA both in the short and long run. The degree of correlation was high at 0.89. The merger seemed to fulfill its objectives of financial and operating synergy.

b) Indian Metals and Ferro Alloys Ltd

Indian Metals and Ferro alloys (IMFA) is based in Orissa and is a fully integrated producer of Ferro Alloys. The merger effected in 2006 with Indian Charge and Chrome Limited (ICCL) in 2006 created a leader in Ferro alloys.

Pre-Merger Analysis

The pre-merger analysis of Indian Metals andFerro Alloys Limited is done here. The Net Sales for the year 2000 was Rupees 134.66 crores while the Expenses were Rupees 127.48 crores. The DER, CR and FATR were considerably high at 6.24, 3.81 and 3.32 respectively. The ICR was reasonable at 1.15 while the profitability was recorded at 1.27 percent. The year 2001 saw the sales surge by 35.85 percent and expenses by 35.85 percent reflecting increase in scale of operations. The DER, CR and FATR continued to be on the higher side at 5.56, 3.33 and 4.06 respectively. ICR also moved up to 1.51 and profitability was recorded at 2.51 percent. For the year 2003 the operating income fell by -6.59 percent while the expenses fell by 2.47 percent. The ratios were also fairly stable with DER, CR, FATR and FCCR at 6.54, 3.29, 4.06 and 1.02 respectively. The profitability however fell to 0.06 percent. In the year 2003 the sales increased by 18.74 percent while the expenses increased by 13.04 percent. While the DER and CR fell down to 4.42 and 3.23 respectively, the FATR and ICR rose to 4.55 and 2.61. The positive performance was reflected in the increased profitability at 4.75 percent. For 2004 sales increased by a small margin at 0.66 percent and expenses by 1.68 percent. The DER, CR and FATR all fell down to

2.47, 2.43 and 4.38. The ICR however rose considerably to 6.58. The profitability also increased to 9.60 percent. The year 2005 saw the sales rise by 34 percent against a 28.02 percent increase in expenses. The DER fell to 1.53 which reflected a considerable decrease in the risk proportion in the capital structure. The CR however again rose to 3.25 reflecting high degree of liquidity. The FATR and ICR were considerably high at 5.47 and 6.68 respectively reflecting efficiency of operations and sufficient cover for financing debts. The profitability rose further to 11.13.

Post-Merger Analysis

The first year after the merger was affected, i.e. in 2006 the sales showed an increase of 98.78 percent against a 110.27 increase in cost of sales. The DER again rose to 5.17 while CR fell to 2.89. The FATR and FCCR also fell by a huge margin to 1.19 and 0.57 respectively. Profitability was respectable at 3.46 percent. For 2007 sales further increased by 28.24 percent while expenses increased by 17.20 percent. The DER fell to 4.49 and FATR to 1.65. The CR and ICR however rose to 3.24 and 2.07 respectively. Profitability was also relatively stable at 2.90 percent. In the year 2008 the sales continued to increase by 25.33 percent while the expenses were reported to have increased by 18.69 percent. The DER dropped to 2.39 which were a positive sign for the capital structure. The CR also fell to 2.34 indicating higher level of activity. The FATR was stable at 1.91 while the ICR was very comfortable at 5.90. The profitability was also very encouraging at 12.15 percent. The year 2009 which was marked by global recession saw the net sales surge by 16.21 percent against a fall of -21.07 percent in expenses which was commendable. The DER fell to 0.77 showcasing higher proportion of owners fund in the capital structure. The CR also fell to 1.82. FATR and FCCR were calculated as 1.85 and 9.17 respectively. Profitability recorded to the tune of 25.99 percent was indeed remarkable taking into consideration the global scenario was marked by economic slowdown.

Hence it is seen that Indian Metals and Ferro Alloys (IMFA) which was financially stable and recording consistent profits seem to have received a shot in the arm with the merger with Indian Charge Chrome Limited (ICCL) as if reflected by the discussion above.

Table 8.4.5: Pre and Post Merger Net Sales of Indian Metal and Ferro Alloys (2001-2009)

Figures in Rs Crore

Pre Merger			Post Merger		
Year	Net Sales	Percentage increase over previous year	Year	Net Sales	Percentage increase over previous year
2000	134.66	-	2006	536.89	98.78
2001	182.93	35.85	2007	688.5	28.24
2002	170.88	-6.59	2008	862.9	25.33
2003	202.91	18.74	2009	1002.74	16.21
2004	201.57	0.66			
2005	270.11	34.00			

Source: Compiled and Calculated from Annual Reports of Indian Metals and Ferro Alloys from 2000 to 2005 Retrieved from
http://www.moneycontrol.com/financials/indianmetalsferroalloysltd/balance-sheet/IMF01

Table 8.4.6: Pre and Post Merger Total Expenditure of Indian Metal and Ferro Alloys (2001-2009)

Figures in Rs Crore

Pre Merger			Post Merger		
Year	Total Expenses	Percentage increase over previous year	Year	Total Expenses	Percentage increase over previous year
2000	127.48	-	2006	475.83	110.27
2001	157.69	23.70	2007	557.65	17.20
2002	153.79	-2.47	2008	661.89	18.69
2003	173.85	13.04	2009	522.41	-21.07
2004	176.77	1.68			
2005	226.3	28.02			

Source: Compiled and Calculated from Annual Reports of Indian Metals and Ferro Alloys from 2000 to 2005 Retrieved from
http://www.moneycontrol.com/financials/indianmetalsferroalloysltd/balance-sheet/IMF01

Table 8.4.7: Pre Merger Ratio Analysis of Indian Metals and Ferro Alloys Ltd (2001-05)

Pre-Merger					
Year	Debt Equity Ratio (DER)	Current Ratio (CR)	Fixed Assets Turnover Ratio (FATR)	Interest Coverage Ratio (ICR)	Profitability (%)
2000	6.24	3.81	3.32	1.15	1.27
2001	5.56	3.33	4.42	1.51	2.51
2002	6.54	3.29	4.06	1.02	0.06
2003	4.42	3.23	4.55	2.61	4.75
2004	2.47	2.43	4.38	6.58	9.60
2005	1.53	3.25	5.47	6.68	11.13

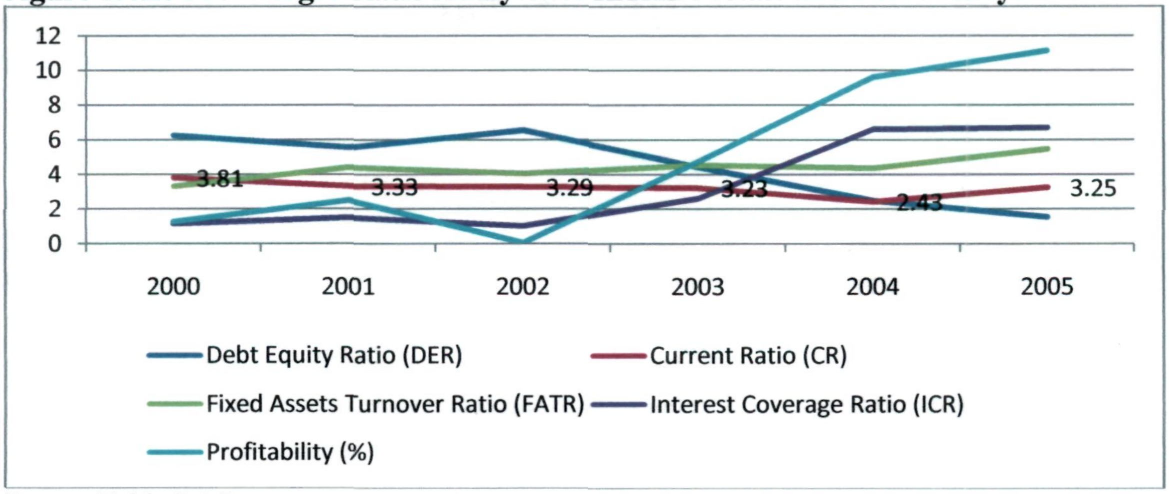
Source: Compiled and Calculated from Table 8.4.5, Appendix 17 and Appendix 18

Table 8.4.8: Post Merger Ratio Analysis of Indian Metals and Ferro Alloys Ltd (2006-09)

	Post-Merger				
	Debt Equity Ratio (DER)	Current Ratio (CR)	Fixed Assets Turnover Ratio (FATR)	Interest Coverage Ratio (ICR)	Profitability (%)
2006	5.17	2.89	1.19	0.57	3.46
2007	4.49	3.24	1.65	2.07	2.90
2008	2.39	2.34	1.91	5.90	12.15
2009	0.77	1.82	1.85	9.17	25.99

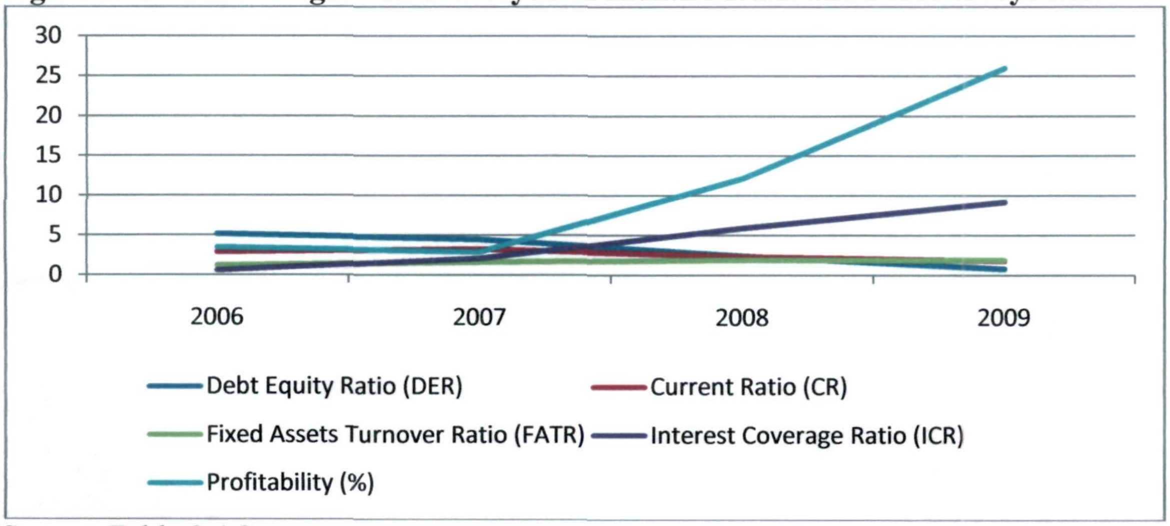
Source: Compiled and Calculated from Table 8.4.5, Appendix 17 and Appendix 18

Figure 8.4.2: Pre Merger Ratio Analysis of Indian Metals and Ferro Alloys



Source: Table 8.4.7

Figure 8.4.3: Post Merger Ratio Analysis of Indian Metals and Ferro Alloys Ltd



Source: Table 8.4.8

Table 8.4.9 deals with the Pre and Post Merger Profitability, FATR and ICR of Indian Metals and Ferro Alloys Limited (IMFA).

1. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post -merger Profitability of Indian Metals and Ferro Alloys (IMFA).**
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger and Post -merger Profitability of Indian Metals and Ferro Alloys (IMFA).

The first Hypothesis studies the relationship between the pre and Post Merger profitability of Indian Metals and Ferro Alloys Limited (IMFA). The correlation coefficient (r) is 0.837 while the coefficient of determination (r^2) is 0.701. The regression equation Y on X shows that for every unit change in X that is the Pre Merger profitability of Indian Metals and Ferro Alloys Limited (IMFA) there is a change of 1.80 units in Y that is the Post Merger profitability of Indian Metals and Ferro Alloys Limited (IMFA). The intercept is also low at 0.35.The t value comes out at 0.80 for four years of Pre and Post Merger. The table value of t when v=6 at $t_{0.05}$ is 2.48. The calculated value being less than the table value leads to **rejection of the Alternative Hypothesis and acceptance of the Null Hypothesis.** Hence the relation is statistically insignificant and there is no relation between the Pre and Post Merger profitability values. When the t value is calculated for six years of Pre Merger and four years of Post Merger it comes out to be 1.29. The table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value is again less than the table value. **Hence the Null Hypothesis is accepted and the Alternative Hypothesis is rejected.** The relation is statistically insignificant and there is no relation between the pre and Post Merger profitability of Indian Metals and Ferro Alloys Limited (IMFA).

2. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post -merger FATR of Indian Metals and Ferro Alloys (IMFA).**
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger and Post -merger FATR of Indian Metals and Ferro Alloys (IMFA).

This Hypothesis examines the relationship between the Pre and Post Merger FATR of Indian Metals and Ferro Alloys Limited (IMFA). The correlation coefficient (r) is calculated as 0.62 which is a moderate degree of positive correlation. The coefficient of determination (r^2) is 0.38 which indicates that 38.03 percent of variance is explained by this relation. The regression equation Y on X shows that for every unit change in X that is the Pre Merger FATR of Indian Metals and Ferro Alloys Limited (IMFA) there is 0.33 units change in the Post Merger FATR of Indian Metals and Ferro Alloys Limited (IMFA). The t value for four years of Pre and Post Merger is calculated as 8.63 while the table value of t when v=6 at $t_{0.05}$ is 2.48. The calculated value being more than the table value leads to the conclusion that the relation is statistically significant and there is a relation between the Pre and Post Merger values. **The Null Hypothesis is rejected in favor of the Alternative Hypothesis.** The t value is further calculated for six years of Pre Merger and four years of Post Merger. It gives the t value at 7.17 while the table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value being more than the table value leads to **rejection of Null Hypothesis and acceptance of Alternative Hypothesis.** Hence there is a relation between the Pre and Post Merger values of FATR.

3. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post -merger ICR of Indian Metals and Ferro Alloys (IMFA).**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger and Post -merger ICR of Indian Metals and Ferro Alloys (IMFA)

The third Hypothesis deals with the relation between the Pre and Post Merger values of ICR. The correlation coefficient (r) is worked out as 0.942 which is a very high degree of positive correlation while the coefficient of determination (r^2) of determination is 0.887. The regression Y on X shows that for every unit change in X that is the Pre Merger ICR of Indian Metals and Ferro Alloys Limited (IMFA) there is 1.28 units change in the Post Merger ICR of Indian Metals and Ferro Alloys Limited (IMFA). The intercept is also low at 0.974. The t value is calculated as 0.085 while the table value of t when v=6 at $t_{0.05}$. The calculated value is less than the table value which leads to the relation being statistically insignificant. **The Null Hypothesis is accepted and the Alternative Hypothesis is rejected.** The t value is further calculated for six years of Pre Merger and four years of Post Merger. It gives the t value at 0.57. The table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value is again less than the table value. Hence the relation is statistically insignificant and there is no relation between the Pre and Post Merger ICR. **The Null Hypothesis is accepted while the Alternative Hypothesis is rejected.**

Table 8.4.9: Pre and Post Merger Analysis of Profitability, FATR and ICR of IMFA

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
1. X= Pre-Merger Profitability of Indian Metals and Ferro Alloys Y=Post-Merger Profitability of Indian Metals and Ferro Alloys	=0.837	0.701	Y on X is Y=1.80X-0.35	t=0.80* t=1.29**
2. X= Pre-Merger FATR of Indian Metals and Ferro Alloys Y=Post-Merger FATR of Indian Metals and Ferro Alloys	=0.6167	0.3803	Y on X is Y=0.33X+0.116	t=8.63* t=7.17**
3. X= Pre-Merger ICR of Indian Metals and Ferro Alloys Y=Post-Merger FCCR of Indian Metal and Ferro Alloys	=0.942	0.887	Y on X is Y=1.28X-0.974	t=0.085* t=0.57**

*Four Years of Pre and Post Merger Undertaken
**Six Years of Pre Merger and Four Years of Post-Merger Undertaken
Source: Compiled and Calculated from Table 8.4.7 and Table 8.4.8

Table 8.4.10 studies the relationship between the Pre and Post Merger EPS of Indian Metals and Ferro Alloys Limited (IMFA).

4. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post -merger EPS of Indian Metals and Ferro Alloys (IMFA).**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger and Post -merger EPS of Indian Metals and Ferro Alloys (IMFA)

The correlation coefficient (r) is worked out as 0.92 which is a very high degree of positive correlation. The coefficient of determination (r^2) is 0.846. The regression equation Y on X states that for every unit change in X that is the Pre Merger EPS of Indian Metals and Ferro Alloys Limited (IMFA) there is 1.27 units change in Y that is the Post Merger EPS of Indian Metals and Ferro Alloys Limited (IMFA). The intercept is high at 32.57 indicating the strong influence of other factors. The value of t is worked out as 1.26 for four years of Pre and Post Merger. The table value of t when v=6 at $t_{0.05}$ is calculated as 2.48. The calculated value being less than the table value leads to **rejection of Alternative Hypothesis and acceptance of Null Hypothesis.** Hence the values are statistically insignificant. The t value is further calculated as 1.83 for six years of Pre Merger and four years of Post Merger. The table value when v=8 at $t_{0.05}$ is 2.31. The calculated value is again lesser than the table value leading to rejection of Alternative Hypothesis and acceptance of Null Hypothesis. Hence there is no relation between the Pre and Post Merger values of EPS and the relation is statistically insignificant.

Table 8.4.10: Pre and Post Merger Analysis of EPS of IMFA

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	**T-test
5. X=Pre-Merger EPS of Indian Metals and Ferro Alloys Ltd Y=Post Merger EPS of Indian Metals and Ferro Alloys Ltd	0.9198	0.846	Y on X is Y=1.27X+32.57	t=1.26* t=1.833**

*Four years of Pre and Post Merger undertaken
**Six years of Pre-merger and four years of Post Merger taken
Source: Compiled and Calculated from Appendix 18

5. H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profit Margin
H_a (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profit Margin

6. H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profit Rate
H_a (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profit Rate

Table 8.4.11 deals with the pre and Post Merger Profit Margin and Profit Rate of Indian Chrome Charge Limited (ICCL) and Indian Metals and Ferro Alloys Limited (IMFA). The Pre Merger profit margin of Indian Chrome Charge Limited (ICCL) is -1.36 while that for Indian Metals and Ferro Alloys Limited (IMFA) is 0.05. The Post Merger Profit Margin is 0.11 which reflects satisfactory improvement over the Pre

Merger figures. The Pre Merger Profit Rate of Indian Chrome Charge Limited (ICCL) is -0.44 while that for Indian Metals and Ferro Alloys Limited (IMFA) is 0.06. The Post Merger Profit Rate of Indian Metals and Ferro Alloys Limited (IMFA) is 0.10 which is again an improvement over the Pre Merger figures.

Table 8.4.11: Pre and Post Merger Profit Rate and Profit Margin for Indian Chrome Charge Limited and Indian Metals and Ferro Alloys

	Net Sales Profit Margin= $\frac{PAT}{NS}$			Total Assets Profit Rate= $\frac{PAT}{TA}$		
	Pre-merger Average	**Post-merger Average**	**Percentage Change**	**Pre-merger Average**	**Post-merger Average**	**Percentage Change**
a) Indian Chrome Charge Limited	-1.36	NA	-	-0.44	NA	-
b) Indian Metals and Ferro Alloys	0.05	0.11	120	0.06	0.10	66.67

Source: Compiled and Calculated from Table 8.4.1, Table 8.4.5, Appendix 15, Appendix 16, Appendix 17 and Appendix 18

IMFA was a steady and profitable enterprise with the company managing to earn profits over ten years that is from 2000 to 2009 at a satisfactory and steady rate. The profitability rate seemed to be picking after the initial slowdown just after the merger. The Hypotheses testing reveals that there is a statistically significant relation between the Pre and Post Merger FATR of IMFA having a moderate degree of positive correlation at 0.62. The relation between the Pre and Post Profitability, ICR and EPS is statistically insignificant. The Profit Margin after the merger shows an increase of 120 percent while the Profit Rate registered an increase of 66.67percent. Hence the merger appeared to have accrued financial and operating synergies after the merger in these terms.

8.5 ***Bellary Steel and Alloys Limited and Pittsburgh Iron and Steel (2005-06) : Pre and Post Merger Performance Assessment***

Bellary Steel and Alloys Limited situated in Bellary was incorporated on 17 May 1984 in Karnataka and mainly deals with the manufacturing and marketing of reinforcement bars and carbon and alloy steel rounds.

a) Bellary Steel and Alloys Limited

Pre-Merger Analysis

The analysis presented in Tables 8.5.1, 8.5.2 and 8.5.3 reflects upon the financial position of Bellary Steel before and after the merger with Pittsburgh Iron and Steel.

In the year 2001 the Sales turnover stood at Rs 263.03 crores while the expenditure was at Rs 244.48 crores. The DER was high at 4.24 while the CR was more than comfortable at 2.65. FATR was however low at 0.29 and so was the ICR at 0.42. Losses were being reported at -6.64 percent. The year 2002 saw the sales fall by -41.72 percent while the expenditure also fell by -53.52 percent indicating a fall in the scale of operations. There were a huge percentage of debt funds with the DER at 14.72. The liquidity was also in doldrums with the CR at 0.39. FATR fell further to 0.14 while ICR became negative at -7.04. Huge losses were reported with the Profitability at -117.02 percent.

The year 2003 witnessed fall in sales by another -87.10 percent against a fall in expenditure by -89.27 percent. The net profit at -501.82 reflected that the concern was running into serious losses. The MPS also fell by -73.335 to Rs 0.8. DER was very high at 22.74 while the CR improved to 1.12. FATR was again very low at 0.016 while ICR fell further to -0.005.The year 2004 saw the operations of Bellary Steel and Alloys Ltd in trouble with the sales falling by a huge -71.17 percent against a 55.62 percent fall in the expenditure for the similar period. The Net Profit was at a dismal -391.40 percent and FATR at 0.004 was a reflection of the dismal state of affairs. The ICR was at -0.12. CR was stable at 1.01.DER at -43.64 reflected a major problem with the capital structure. For 2005 the sales increased by 329.47 percent against a 270.24 percent increase in expenditure. The story of losses continued with the net loss at -300.74 percent. Capital structure was still in trouble with the DER at -15.47. FATR bettered slightly to 0.016 and ICR was at -0.05. CR fell slightly to 0.95. In the year 2006 the sales turnover increased by 47.92 percent against 71.04 percent increase in expenditure. A huge volume of loss was again recorded at -224.05 percent while the DER was still negative at -9.98. CR was stable at 0.98.FATR was at 0.022 while ICR was still negative at -0.14. The MPS moved up by 257.81 percent to Rs 6.87.

Post-Merger Analysis

The Post Merger analysis of Bellary Steel and Alloys Limited reveals that the sales fell by -0.31 percent in 2007 against a fall of -0.41 percent in expenditure. Losses continued with the net loss for the year at -297.06 percent. The DER and FATR were also not encouraging at -7.14 and 0.02 respectively. CR was at 0.91 while ICR was no better at -0.11. The year 2008 was no better with the global recession also gripping the economy with net losses at -229.46 percent. The increase in sales by 39.50 and expenditure by 25.59 was however encouraging. The DER continued being negative at -5.73. FATR was at 0.026. CR was relatively stable at 0.90 and ICR was far from satisfactory at-0.14.

For 2009 the sales turnover fell by -20.83 percent and Expenditure increased by 4.48. The losses increased to -360.2 percent. DER was at -4.91 and FATR was at 0.018. CR was at 0.81 while ICR was ay 0.11.

The merger did not see any positive effect on operating results of Bellary Steel and Alloys Limited with losses being recorded before and after the merger.

Table 8.5.1: Pre and Post Merger Sales of Bellary Steel and Alloys Limited (2001-2009)

Figures in Rs Crore

Pre Merger			Post Merger		
Year	**Sales Turnover**	**Percentage Increase over previous Year**	**Year**	**Sales Turnover**	**Percentage Increase over previous Year**
2001	263.03		2007	36.10	-0.31
2002	153.29	-41.72	2008	50.36	39.50
2003	19.77	-87.10	2009	39.87	-20.83
2004	5.70	-71.17			
2005	24.48	329.47			
2006	36.21	47.92			

Source: Compiled and Calculated from Annual Report of Bellary Steel and Alloys Limited from 2000 to 2006. Retrieved from http://www.moneycontrol.com/financials/bellarysteelalloys/balance-sheet/BSA01

Table 8.5.2: Pre- Merger and Post-Merger Expenditure of Bellary Steel and Alloys Limited (2001-2009) Figures in Rs Crore

Pre Merger			Post Merger		
Year	**Expenditure**	**Percentage Increase over previous Year**	**Year**	**Expenditure**	**Percentage Increase over previous Year**
2001	244.48		2007	34.12	-0.41
2002	113.64	53.52	2008	42.85	25.59
2003	12.19	-89.27	2009	44.77	4.48
2004	5.41	-55.62			
2005	20.03	270.24			
2006	34.26	71.04			

Source: Compiled and Calculated from Annual Report of Bellary Steel and Alloys Limited from 2000 to 2006. Retrieved from http://www.moneycontrol.com/financials/bellarysteelalloys/balance-sheet/BSA01

Table 8.5.3: Pre Merger Ratio Analysis of Bellary Steel and Alloys Limited (2001-2006)

Pre Merger					
Year	**DER**	**CR**	**FATR**	**ICR**	**Net Profit %**
2001	4.24	2.65	0.29	0.42	-6.54
2002	14.72	0.39	0.14	-7.04	-117.02
2003	22.74	1.12	0.016	-0.005	-501.82
2004	-43.64	1.01	0.004	-0.12	-391.40
2005	-15.47	0.95	0.016	-0.05	-300.74
2006	-9.98	0.98	0.022	-0.14	-224.05

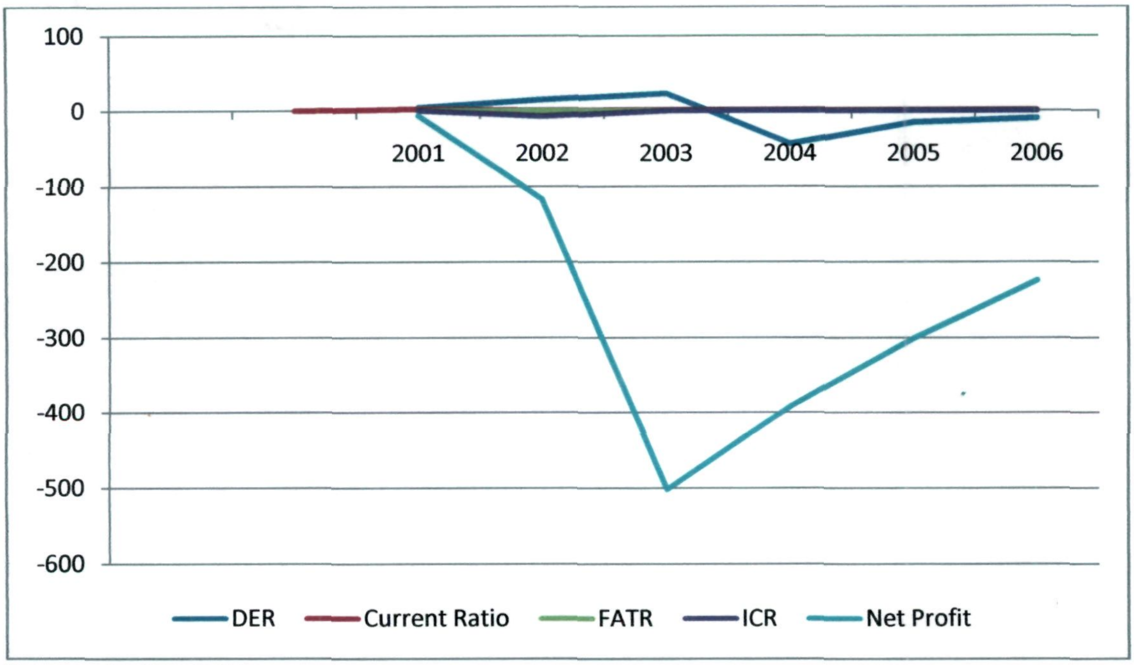
Source: Compiled and Calculated from Table 8.5.1, Appendix 11 and Appendix 12

Table 8.5.4: Post Merger Ratio Analysis of Bellary Steel and Alloys Limited (2007-2009)

Post Merger					
	Debt Equity Ratio (DER)	**Current Ratio (CR)**	**Fixed Assets Turnover Ratio (FATR)**	**Interest Coverage Ratio (ICR)**	**Profitability (%)**
2007	-7.14	0.91	0.02	-0.11	-297.06
2008	-5.73	0.90	0.026	-0.05	-229.49
2009	-4.91	0.81	0.018	-0.11	-360.20

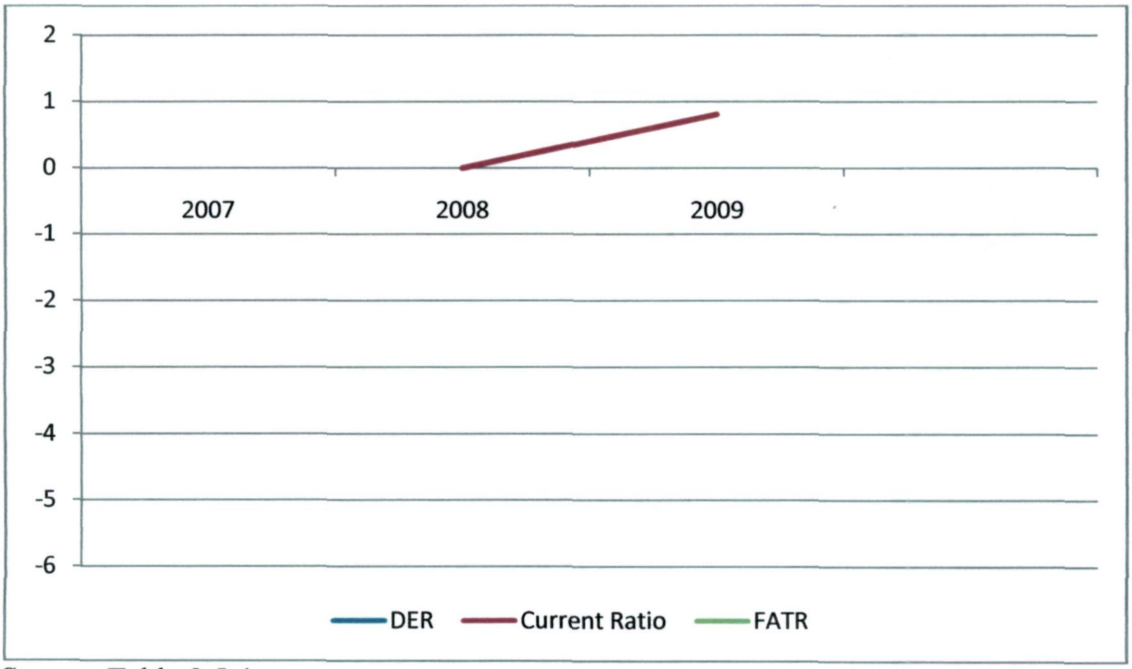
Source: Compiled and Calculated from Table 8.5.1, Appendix 11 and Appendix 12

Figure 8.5.1: Pre Merger Ratio Analysis of Bellary Steel and Alloys Limited



Source: Table 8.5.3

Figure 8.5.2: Post Merger Ratio Analysis of Bellary Steel and Alloys Limited



Source: Table 8.5.4

Table 8.5.5 explores the relationship between the Pre and Post Merger Profitability, FATR and ICR of Bellary Steels.

1. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-Merger Profitability of Bellary Steel**
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-
   Merger Profitability of Bellary Steel

The study of the Pre and Post Merger profitability of Bellary Steels gives the correlation coefficient (r) at -.44 which is moderate degree of negative correlation. The coefficient of determination (r^2) comes out as 0.1936 indicating that only a small part of the variance is explained by this relation. The regression equation Y on X gives further insight into the relation. For every one unit change in X that is the Pre Merger profitability of Bellary Steels the Post Merger profitability that is Y is affected by -0.34 units. The value of constant is extremely high at 400.50. Hence there is a strong play of other factors and there is limited relation between X and Y. Student t-test is also done to test the relation for statistical significance. The t value is worked out as 0.16 when three years of Pre and Post Merger are undertaken. The table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value of t is less than the table value which leads to the inference that the relation is statistically insignificant. **The Null Hypothesis is accepted and the Alternative Hypothesis is rejected.** Hence there is no relation between the Pre and Post Merger profitability of Bellary Steels. Further the t value is calculated for six years of Pre Merger and three years of Post Merger and it comes out to be 0.349. The table value of t when v=7 at $t_{0.05}$ is 2.37. The calculated value being less than the table value leads to the conclusion that the relation is statistically insignificant. **The Null Hypothesis is accepted while the Alternative Hypothesis is rejected.**

2. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger FATR of Bellary Steel**
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger FATR of Bellary Steel

Table 8.5.5 also explores the relationship between the Pre and Post Merger FATR of Bellary Steels. The correlation coefficient (r) is worked out as -0.05 indicating a low degree of negative correlation. The coefficient of determination (r^2) is 0.0025 showing that a very small part of the variance is explained. The regression equation Y on X shows that for every one unit change in X that is the Pre Merger FATR of Bellary Steels the Post Merger FATR that is Y is moved by -0.024 units. The intercept is also low at 0.022. The t value is calculated as 1.278. The table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value is thus lesser than the table value. Hence the relation is statistically insignificant which leads to **rejection of Alternative Hypothesis and acceptance of Null Hypothesis**. Hence there is no effect of merger on the Pre and Post FATR. The t value is further calculated for six years of Pre Merger and three years of Post Merger. It gives the t value at 0.884. The table value of t when v=7 at $t_{0.05}$ is 2.37. The calculated value is again less than the table value which leads to the inference that the relation is statistically insignificant in the longer run too. **The Null Hypothesis is accepted while the Alternative Hypothesis is rejected.** Hence there is no effect of merger on the Pre and Post Merger FATR.

3. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger ICR of Bellary Steel**
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger ICR of Bellary Steel

The relation between the Pre and Post Merger ICR is explored further in Table 8.5.5. The correlation coefficient (r) is calculated as 0.97 indicating a very degree of positive correlation. The coefficient of determination (r^2) comes out as 0.9409 showing that a major percentage of the variance is explained by this relation. The regression Y on X shows that for every unit change in X that is the Pre Merger ICR of Bellary Steels, the Post Merger ICR that is Y moved by 0.716 units. Intercept value is also low at 0.016. Student t-test is further undertaken which gives the t value as 5.78 when three years of Pre and Post Merger are undertaken. The table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value being more than the table value leads to **the acceptance of Alternative Hypothesis and rejection of the Null Hypothesis.** The relation is taken to be as statistically significant and it is inferred that there is a relation between the Pre and Post Merger values. Further six years of Pre Merger and three years of Post Merger are taken up for the calculation of t value. It comes out as 0.643 while the calculated value of t when v=7 at $t_{0.05}$ is 2.37. The calculated value being less than the table value leads to the conclusion that the relation is statistically insignificant. **The Null Hypothesis is accepted while the alternative Hypothesis is rejected.** Hence there is no effect of merger on the value of ICR after the merger.

Table 8.5.5: Pre and Post Merger Analysis of Profitability, FATR, ICR of Bellary Steels

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	**T-test
1. X= Pre-Merger Profitability of Bellary Y=Post-Merger Profitability of Bellary	=-0.44	0.1936	Y on X is Y=-0.34X-400.50	t=0.16* t=0.349**
2. X= Pre-Merger FATR of Bellary Y=Post-Merger FATR of Bellary	=-0.05	0.0025	Y on X is Y=-0.024X+0.022	t=1.278* t=0.884**
3. X= Pre-Merger ICR of Bellary Y=Post-Merger ICR of Bellary	=0.97	0.9409	Y on X is Y=0.716X-0.016	t=5.78* t=0.643**

*Three Years of Pre and Post Merger Undertaken
**Six Years of Pre Merger and Three Years of Post-Merger Undertaken
Source: Compiled and Calculated from Table 8.5.3 and 8.5.4

Table 8.5.6 explores the relationship of the Profitability of the firm with the MPS before and after the merger.

4. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger Profitability and Pre-merger MPS of Bellary Steel**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger Profitability and Pre-merger MPS

The study of Pre Merger Profitability and Pre Merger MPS gives the correlation coefficient (r) at 0.03 which indicates a low degree of positive correlation. The coefficient of determination (r^2) is also very low at 0.0009. According to the regression equation Y on X for one unit of movement in Y that is the Pre Merger MPS, the Pre Merger profitability is affected by 2.40 units. The intercept is also high at -251.21 which reflect the strong play of other factors. The equation Y on X shows that for one unit movement in X that is the Pre Merger Profitability, the Pre Merger MPS is moved by 0.00041 units. Intercept is at 2.27 units. The t value is undertaken at 6.70. The table value of t when v =7 at $t_{0.05}$ is 2.37. The calculated value is more than the table value. Hence the relation is statistically significant which leads to **acceptance of Alternative Hypothesis and rejection of Null Hypothesis.** Hence there is a relation between the Pre Merger Profitability and MPS of Bellary Steel.

5. **H_0 (Null Hypothesis) = There is no relation between the Post Merger Profitability and Post -merger MPS of Bellary Steel**
   H_a (Alternative Hypothesis) = There is a relation between the Post Merger Profitability and Post -merger MPS

Further the relation between the Post Merger profitability and MPS is examined. The correlation coefficient (r) comes out as 0.77 which is a high degree of positive correlation. The coefficient of determination (r^2) is also high at 0.5929 implying that the variance is explained by this relation. The Regression equation X on Y shows that for every one unit of movement in Y that is the Post Merger MPS the Post Merger profitability is affected by 31.19 units. The constant is extremely high at 364.51 indicating the effect of other factors. The equation Y on X shows that for every one unit change in X that is the Post Merger profitability the Post Merger MPS is moved by just 0.019 units. The intercept is high at 7.84 giving indications of the role of other factors. The t value is calculated as 7.93. The table value of t when v=7 at $t_{0.05}$ is 2.37. The calculated value being more than the table value leads to the **acceptance of the Alternative Hypothesis and rejection of the Null hypothesis** and it is implied that the relation is statistically significant.

Table 8.5.6: Pre and Post Merger Analysis of MPS and Profitability of Bellary Steel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
4. X=Pre-Merger Profitability of Bellary Steel Y=Pre Merger MPS of Bellary Steel	=0.03	0.0009	X on Y is X=2.40Y-251.21 Y on X is Y=0.00041X+2.27	6.70*
5. X=Post Merger Profitability of Bellary Y=Post Merger MPS of Bellary	=0.77	0.5929	X on Y is X=31.19Y+364.51 Y on X is Y=0.0191X+7.84	7.93*

*Six Years of Pre Merger taken
**Three Years of Post Merger taken
Source: Compiled and Calculated from Table 8.5.3, Table 8.5.4 and Appendix 12

Table 8.5.7 finds out a relation between the Pre Merger and Post Merger MPS and also the Pre and Post Merger EPS.

6. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger MPS and Post -merger MPS of Bellary Steel**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger MPS and Post -merger MPS of Bellary Steel

The correlation coefficient (r) between the Pre Merger and Post Merger MPS comes out to be 0.93 which reflects a very high degree of positive correlation. The coefficient of determination (r^2) is calculated as 0.859 indicating that a large proportion of variance is explained by the relation. The equation Y on X shows that for every unit change in X that is the Pre Merger MPS, the Post Merger MPS is moved by 0.46 units. The value of intercept is low at 0.78. The value of t is calculated as 0.220 while the table value when v=4 at $t_{0.05}$ is 2.78. The calculated value is less than the table value. It leads to rejection of **Alternative Hypothesis and acceptance of Null Hypothesis.** Hence there is no relation between the Pre and Post Merger values. Further when the test is applied for seven years of Pre Merger and three years of Post Merger it gives the t value at 0.28 while the table value of t when v=8 at $t_{0.05}$ is 2.31. Here again the calculated value is less than the table value which leads to the conclusion that the relation is statistically insignificant even in the longer run. **The Null Hypothesis is accepted and the Alternative Hypothesis is rejected.** Hence there is no relation between the Pre and Post Merger MPS.

7. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger EPS and Post -merger EPS of Bellary Steel**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger EPS and Post -merger EPS of Bellary Steel

The relation between the Pre and Post Merger EPS is further studied. It gives the correlation coefficient (r) at -0.43 indicating a moderate degree of negative correlation. The coefficient of determination (r^2) is 0.2292 indicating that only a limited variance is explained by this relation. The regression equation Y on X shows that for every unit change in X that is the Pre Merger EPS, the Post Merger EPS is moved by -0.027 units which is very less. The intercept is also low at -1.8. The t-test is further undertaken. It gives the value of t as 1.129 when three years of Pre and Post Merger are undertaken. The calculated value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value being less than the table value leads to the conclusion that the relation is statistically insignificant. The Null Hypothesis is accepted while the

Alternative Hypothesis is rejected. Hence there is no relation between the Pre and Post Merger EPS. Further when the value of t is calculated for six years of Pre Merger and three years of Post Merger are undertaken it gives the t value at 1.33. The table value of t when v=7 at $t_{0.05}$ is 2.45. The calculated value is gain less than the table value indicating that the relation is statistically insignificant. The Null Hypothesis is accepted and the Alternative Hypothesis is rejected. Hence there is no relation between the Pre and Post Merger values of EPS.

Table 8.5.7: Pre and Post Merger Analysis of MPS and EPS of Bellary Steel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
8. X=Pre-Merger MPS of Bellary Y=Post Merger MPS of Bellary	0.93	0.859	Y on X is Y=0.46X+0.78	t=0.220* t=0.28**
9. X=Pre-Merger EPS of Bellary Y=Post Merger EPS of Bellary	-0.48	0.2292	Y on X is Y=-0.027X-1.8	t=1.129* t=1.33***

*Three years of Pre and Post Merger undertaken
**Seven years of Pre-merger and Three years of Post Merger taken
*** Six years of Pre-merger and Three years of Post Merger taken
Source: Compiled and Calculated from Appendix 12

Bellary Steel's historical performance was dismal with losses being incurred since 2001 and they seemed to just magnify after the merger and increased manifold over time. The study of Hypotheses reveals that the Pre Merger Profitability, FATR and ICR did not have a statistically significant relation with the Post Merger figures. The ICR in the short run was though affected having a high degree of positive correlation. However both in the Pre Merger and Post Merger stage there is a statistically significant relation between the Profitability and MPS. In the Pre Merger stage the degree of correlation is low at 0.03 while the degree of correlation is high at 0.77. Post Merger the Profitability is affected by 31.19 units while intercept is high at 364.51 units. In case of MPS it is affected by just 0.019 units due to a unit change in profitability. The Pre Merger MPS and EPS also do not seem to have a relation with the Post Merger statistic. Hence individually the MPS or EPS are not affected by merger.

b) Pittsburgh Iron and Steel Ltd

S and Y Mills Limited was incorporated in 1994 and the company dealt mainly with the manufacturing of textiles and expanded to the segment of readymade garments. To cope up with the accumulated losses in 2001, the company eventually sold off its manufacturing unit and Elgo Impex Private Limited acquired the promoter shares. The new management discontinued the textile business and made an entry into the manufacturing and trading of steel[10]. The merger with Bellary Steel and Alloys Limited was affected on 20 March 2006[11]

Pre-Merger Analysis

The year 2000 saw the sales of Pittsburgh Iron and Steel at Rs 17.46 crores. The PAT/Total Income is at 4.5 percent. DER is at 1.1. The sales for 2001 rose by 1.20 percent while the PAT/Total Income fell to 3.5 percent and DER was relatively stable at 1.04. Trouble began to brew with the sales falling by 1.75 percent in 2002. The PAT/Total Income fell dramatically to -3.08 percent. DER however increased to 1.23. The year 2003 saw the sales fall by a huge -39.06 percent. The PAT/Total Income also fell to -18.1 percent while the DER dropped to 0.88. For 2004 the fall in sales continued unabated with a fall of -57.47 percent while the cost of sales was Rs 4.62 crores for the period. The PAT/Total Income was at a dismal -14.85 percent. The DER fell further to 0.74. The CR was at 2.68 while the FATR was at 0.87. The year 2005 also did not bring any good news with sales falling by another -48.22 percent against a 21.43 percent fall in cost of sales. The PAT/Total Income was worrisome at -39.61, while the proportion fell drastically with DER at 0.11. The CR was high at 3.51 while the FATR was at 2.31. Sales continued to fall and the fall was by -47.64 percent in 2006 against a huge 42.98 percent fall in cost of sales. The PAT/Total Income fell to a disturbing -85.31. The loans were nil. CR was very high at 8.7 indicating the low level of operations. FATR was at 9.62.

Post-Merger Analysis

The year 2007 saw surprisingly the sales surge to 6.01 crores that is an increase by 365.89 percent against an increase of 189.37 percent in cost of sales. The positive results led to PAT/Total Income to 0.24 percent. There were no loans. Current assets were put in use as the CR fell to 1.11 while the FATR at 44.73 reflected high level of activity. The year 2008 saw recession struck which led to a fall in liquidity and demand all over the globe which led to no sales being reported for the year 2008 and 2009. The cost of sales for 2008 fell by 98.83 percent. The PAT/Total Income showcased the trouble at Pittsburgh Iron and Steel which was at -2006.22 in 2008. The CR was at 1.11 in 2008 and 5.81 in 2009 depicting the low level of activity.

Table 8.5.8: Pre- Merger and Post-Merger Sales of Pittsburgh Iron and Steel (2000-2009) **Figures in Rs Crore**

	Pre Merger		Post Merger		
Year	**Sales**	**Percentage Change over Previous year**	**Year**	**Sales**	**Percentage Change over Previous year**
2000	17.46		2007	6.01	365.89
2001	17.67	1.20	2008	No Sales	
2002	17.36	-1.75	2009	No Sales	
2003	10.58	-39.06			
2004	4.5	-57.47			
2005	2.33	-48.22			
2006	1.29	-47.64			

Source: Compiled and Calculated from Annual Report of Pittsburgh Iron and Steel from 2000 to 2006. Retrieved from http://www.business-beacon.com/kommon/bin/sr.php?kall=wmnahv&repnum=5433&cocode=31979&deal type=M&dealdate=20060320&dealno=1

Table 8.5.9: Pre- Merger and Post-Merger Cost of Sales of Pittsburgh Iron and Steel (2004-2008)

Figures in Rs crore

Pre Merger			Post Merger		
Year	**Cost of sales**	**Percentage Change over Previous year**	**Year**	**Cost of sales**	**Percentage Change over Previous year**
2004	4.62		2007	5.99	189.37
2005	3.63	-21.43	2008	0.07	-98.83
2006	2.07	-42.98			

Source: Compiled and Calculated from Annual Report of Pittsburgh Iron and Steel from 2000 to 2006. Retrieved from http://money.rediff.com/companies/pittsburgh-iron-and-steels-ltd/16020124/profit-and-loss and http://www.business-beacon.com/kommon/bin/sr.php?kall=wmnahv&repnum=5433&cocode=31979&deal type=M&dealdate=20060320&dealno=1

Table 8.5.10: Pre Merger Ratio Analysis of Pittsburgh Iron and Steel (2000-2006)

Pre-Merger				
Year	**PAT/Total Income %**	**Debt Equity Ratio (DER)**	**Current Ratio (CR)**	**Fixed Asset Turnover Ratio (FATR)**
2000	4.5	1.1	NA	NA
2001	3.55	1.04	NA	NA
2002	-3.08	1.23	NA	NA
2003	-18.1	0.88	NA	NA
2004	-14.85	0.74	2.68	0.87
2005	-39.61	0.11	3.51	2.31
2006	-85.31	no loans	8.7	9.62

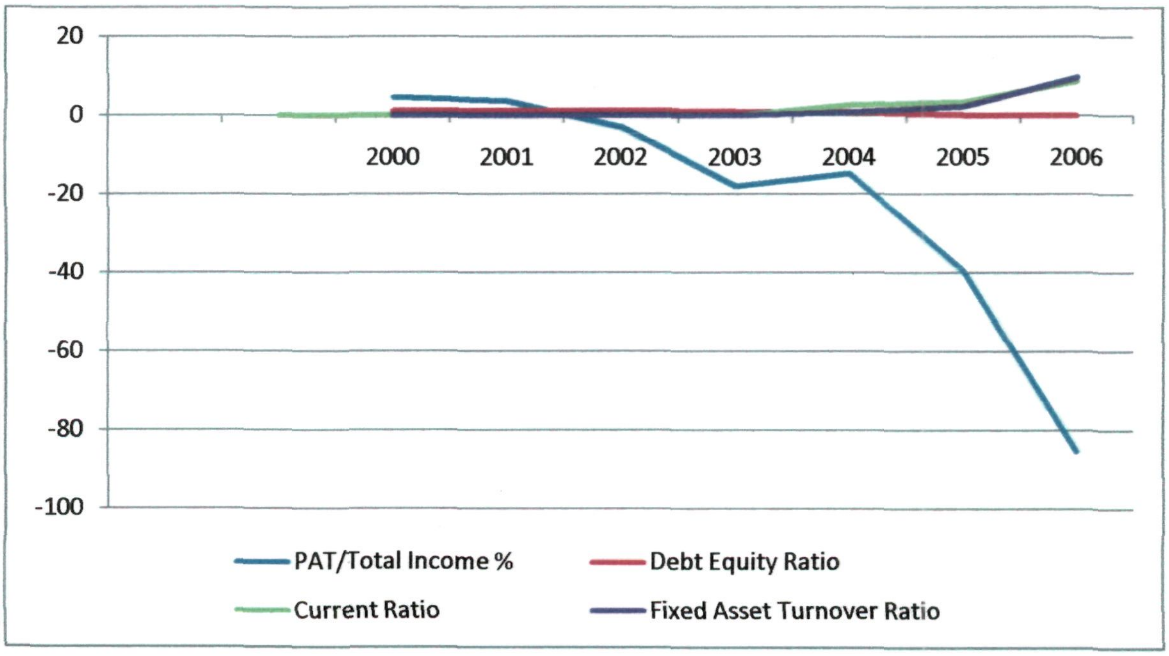
Source: Compiled and Calculated from Table 8.5.8, Appendix 13 and Appendix 14

Table 8.5.11: Post-Merger Ratio Analysis of Pittsburgh Iron and Steel (2007-2009)

Post-Merger				
Year	**PAT/Total Income %**	**Debt Equity Ratio (DER)**	**Current Ratio (CR)**	**Fixed Asset Turnover Ratio (FATR)**
2007	0.24	no loans	1.11	44.73
2008	-2006.22	no loans	5.81	no sales

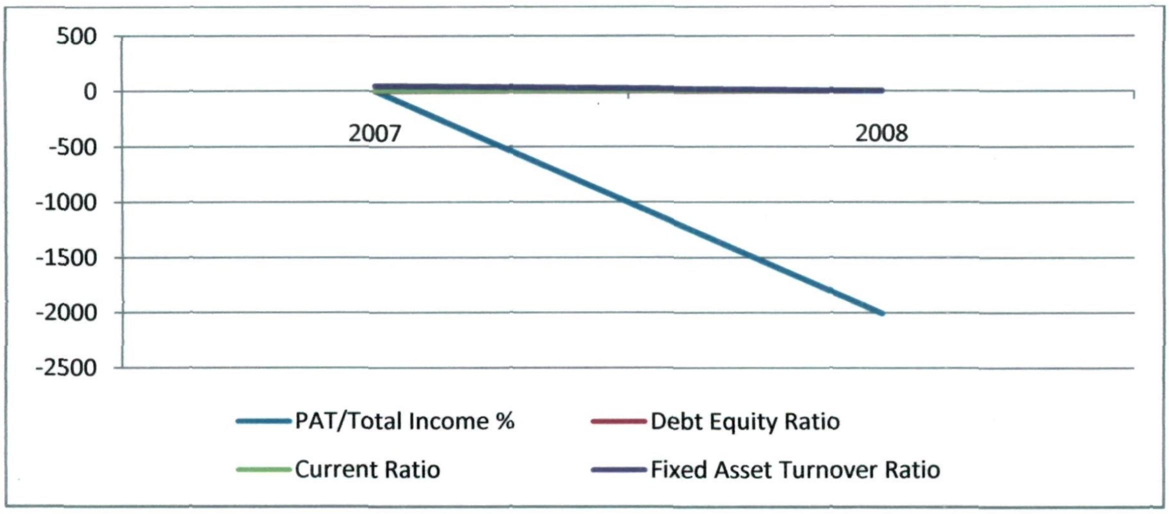
Source: Compiled and Calculated from Table 8.5.8, Appendix 13 and Appendix 14

Figure 8.5.3: Pre Merger Ratio Analysis of Pittsburgh Iron and Steels



Source: Table 8.5.10

Figure 8.5.4: Post Merger Ratio Analysis of Pittsburgh Iron & Steel



Source: Table 8.5.11

Table 8.5.12 deals with the relation between the Pre-Merger Profitability and FATR of Pittsburgh and Post Merger Profitability and FATR of Bellary

1. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger Profitability of Pittsburgh and Post -merger Profitability of Bellary Steel**
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger Profitability of Pittsburgh and Post -merger Profitability of Bellary Steel

Table 8.5.12 gives the correlation coefficient (r) between Pre Merger profitability of Pittsburgh and Post Merger profitability of Bellary is 0.62 which reflects a moderate degree of positive correlation. The coefficient of determination (r^2) is 0.3844 which means that only a small part of the variance is explained by this relation. The regression equation Y on X shows that for every 1.14 unit change in X that is the Pre Merger Profitability of Pittsburgh there is a 1.14 unit change in Y that is the Post Merger profitability of Pittsburgh. The constant is extremely high at 242.41 indicating the strong play of other factors in determining the Post Merger profitability of Bellary. The t test is conducted for three years of Pre and Post Merger and it gives the t value at 9.27 while the table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value is more than the table value which leads to **acceptance of the Alternative Hypothesis and rejection of the Null Hypothesis**. Hence the relation is statistically significant. There is a relation between the Pre and Post Merger values. Further the t values are calculated for seven years of Pre Merger and three years of Post Merger. It gives the value at 5.79 while the table value of t when v=8 at $t_{0.05}$ is 2.31. Here again the calculated value is more than the table value which means that the relation is statistically significant. The **Null Hypothesis is rejected and the Alternative Hypothesis** is accepted even in the longer run. Hence there is a relation between the Pre and Post Merger values.

2. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger Profitability of Pittsburgh and Post -merger Profitability of Bellary Steel**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger Profitability of Pittsburgh and Post -merger Profitability of Bellary Steel

Further the relation between the Pre Merger FATR of Pittsburgh and Post Merger FATR of Bellary is examined. The correlation coefficient (r) is worked out as 0.0729. The coefficient of determination (r^2) comes out as 0.0729 indicating that a very small part of the variance in the variables is explained by this relation. The regression equation Y on X shows that for every unit change in X that is the Pre Merger profitability of Pittsburgh there is a 0.01 unit change in Y that is Post Merger profitability of Bellary. The value of t test is calculated as 1.34 while the table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value is less than the table value which means that the relation is statistically insignificant and there is no relation between the Pre and Post Merger values. **The Null hypothesis is accepted while the Alternative Hypothesis is rejected.**

Table 8.5.12: Pre and Post Merger Analysis of Profitability and FATR of Pittsburgh Iron and Steel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
1. X= Pre-Merger Profitability of Pittsburgh Y=Post-Merger Profitability of Bellary	=0.62	0.3844	Yon X is Y=1.14X+242.41	t=9.27* t=5.79**
2. X= Pre-Merger FATR of Pittsburgh Y=Post-Merger FATR of Bellary	=0.27	0.0729	Y on X is Y=0.01X+0.72	1.34*

*Three Years of Pre and Post Merger Undertaken
**Seven Years of Pre Merger and Three Years of Post-Merger Undertaken
Source: Compiled and Calculated from Tables 8.5.4 and 8.5.10

3. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger EPS of Pittsburgh and Post -merger EPS of Bellary Steel**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger EPS of Pittsburgh and Post -merger EPS of Bellary Steel

Table 8.5.13 studies the relation between the Pre Merger EPS of Pittsburgh and Post Merger EPS of Bellary Steels. The correlation coefficient (r) comes out as -0.271 which is a moderate degree of negative correlation. The coefficient of determination (r^2) is also very low at 0.073 which indicates that a very small variance in the variables is explained by this relation. The regression equation Y on X shows that for every one unit change in X that is the Pre Merger EPS of Pittsburgh there is a -0.247 unit's variation in Y that is the Post Merger EPS of Bellary Steels which shows a very weak relation. The intercept is at 2.19. The t-value is calculated as 1.92 while the table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value being less than the table value leads to **rejection of the Alternative Hypothesis and acceptance of the Null Hypothesis.**

Table 8.5.13: Pre and Post Merger Analysis of EPS of Pittsburgh and Bellary

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	*T-test
3. X=Pre-Merger EPS of Pittsburgh Y=Post Merger EPS of Bellary	-0.271	0.073	Y on X is Y=-0.247X-2.19	1.92

*Three years of Pre and Post Merger taken
Source: Compiled and Calculated from Appendix 12 and Appendix 14

4. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profit Margin**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profit Margin
5. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profit Rate**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profit Rate

Table 8.5.14 gives a description of the Pre and Post Merger Profit Margin and Profit Rate for Bellary Steels and Pittsburgh. The Pre Merger Profit Margin for Bellary is -2.54 while for Pittsburgh it is -0.235. Hence both were running into losses. The Post

Merger Profit margin for Bellary worsened to -3.362 while for Pittsburgh it was very low at 0.00832. The Pre Merger Profit rate for Bellary Steels is -0.034 while for Pittsburgh it is -0.4975. The Post Merger Profit Rate for Bellary Steels didn't improve much at -0.0588 while for Pittsburgh also it was dismal at -0.00495.

Table 8.5.14: Pre and Post Merger Profit Rate and Profit Margin for Merger between Bellary and Pittsburgh

	Profit Margin= PAT / NS			Profit Rate= PAT / TA		
	Pre-merger Average	**Post-merger Average**	**Percentage Change**	**Pre-merger Average**	**Post-merger Average**	**Percentage Change**
4. Bellary	-2.54	-3.362	-32.36	-0.034	-0.0588	-72.94
5. Pittsburgh	-0.235	0.00832	103.54	-0.49745	-0.00495	99.00

Source: Compiled and Calculated from Table 8.5.1, 8.5.8, Appendix 11, Appendix 12, Appendix 13 and Appendix 14

The financials for Pittsburgh Iron and Steel Limited was in a bad state with losses being incurred at a consistent basis. The test of Hypothesis reveals that the profitability of Pittsburgh had an impact on the profitability of Bellary while there was no effect on the EPS and FATR. The Profit Margin and Profit Rate for both the entities also did not pose a satisfactory picture. To sum up the merger was not going anywhere and both the units individually as well as jointly were making no headway. The decision of promoters to foray into the business of Steel by merging with Bellary Steel was questionable with the latter suffering from losses.

8.6 *Southern Iron and Steel Company Limited (SISCOL) and JSW Steel (2007-08)* : *Pre and Post Merger Performance Assessment*

a) SISCOL

The Southern Iron and Steel Company Limited (SISCOL) was incorporated in 1991 and dealt mainly with the manufacture and sale of pig iron and coke with its plants located in Tamil Nadu. It was acquired in January 2005 by the OP Jindal Group on 4 January, 2005 and Rs 5800 million expansion program was launched with the aim to hike its capacity to one million tines by December 2006[12]. At the time of the acquisition SISCOL had accumulated losses up to Rs 350 crore but the takeover helped it to tune them down to Rs 130 crore[13]. The merger between JSW Steel Limited and Southern Iron and Steel Company (SISCOL) was announced in 2008 and was effective from 8 March 2008. The scheme of amalgamation was transfer of shares where JSW Steel would issue 1 equity share for every 22 held in SISCOL[14].

Pre-Merger Analysis

In the year 2003 the operating income of SISCOL was Rupees 273.45 crore and expenses were Rs261.35. The DER was very high at 24.42 and it is symbolic of serious problems regarding the composition of the capital structure where it is highly leveraged on debt. The CR for 2003 was 0.85 highlighting the liquidity issues. The ICR which was at -0.37 further laments the financial difficulties. The FATR was low at 0.31. The loss of -16.71 percent reflects that there was trouble brewing up. Operating Income jumped by a phenomenal 25.73 percent in 2004 and the cost of sales also increased by 29.46 percent. The CR and FATR were stable at 0.99 and 0.38 respectively. The ICR worsened to -0.43. The Net loss increased to -44.62 percent which was a sign of worry. The year 2005 saw operating income fall by 0.08 percent against a similar fall of -15.04 percent in cost of sales. CR increased to 1.26 showing signs of improvement in the financial affairs. The FATR also notched up to 0.39 while the ICR at 3.33 was a sign of relief for the management. The most important aspect was that profit was recorded at 12.32 percent showing that the concern was back on track as regards financial performance.

The year 2006 saw operating increase by a further 57.15 percent while the cost of sales increased by 50.62 percent. The capital structure of the company was also put into order which made the DER positive at 6.27. However the company needed further influx of equity capital as the debt proportion was very high. The CR improved to 2.13 signalling better liquidity and the FATR rose to 0.47 highlighting efficient operations. The ICR at 0.87 was very low and profits dropped marginally to 8.29 percent. The year 2007 saw the Operating income rise by 38.67 percent against a 32.95 percent increase in cost of sales. The DER was relatively stable at 6.54 but still on the higher side while the CR dropped to 1.04. FATR was at 0.41 while the ICR improved to 1.98. The profitability was also stable at 7.97.

Table 8.6.1: Pre- Merger Operating Income of SISCOL (2003-2007)

Figures in Rs Crore

Year	Operating Income	Percentage Increase
2003	273.45	
2004	343.82	25.73
2005	316.85	-0.08
2006	497.93	57.15
2007	690.46	38.67

Source: Compiled and Calculated from Annual Reports of SISCOL 2003 to 2007. Retrieved from http://www.moneycontrol.com/financials/southernironsteel/profit-loss/SIS04

Table 8.6.2: Pre-Merger Cost of Sales of SISCOL (2003-2007)

Figures in Rs Crore

Year	Total Expenses	Percentage Increase
2003	261.35	
2004	338.35	29.46241
2005	287.45	-15.0436
2006	432.96	50.62098
2007	575.64	32.95455

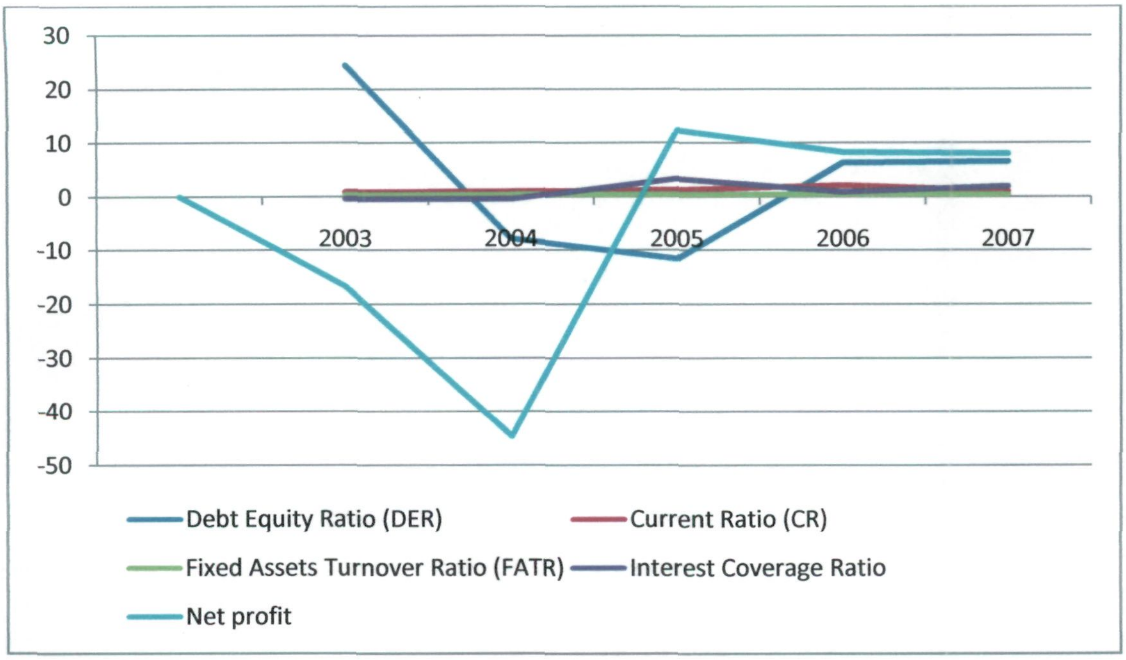
Source: Compiled and Calculated from Annual Reports of SISCOL 2003 to 2007. Retrieved from
http://www.moneycontrol.com/financials/southernironsteel/profit-loss/SIS04

Table 8.6.3: Pre- Merger Ratio Analysis of SISCOL (2003-2007)

Year	Debt Equity Ratio (DER)	Current Ratio (CR)	Fixed Assets Turnover Ratio (FATR)	Interest Coverage Ratio	Net profit (%)
2003	24.42	0.85	0.31	-0.37	-16.71
2004	-7.89	0.99	0.38	-0.43	-44.62
2005	-11.62	1.26	0.39	3.33	12.32
2006	6.27	2.13	0.47	0.87	8.29
2007	6.54	1.04	0.41	1.98	7.97

Source: Compiled and Calculated from Table 8.6.1 and Appendix 8

Figure 8.6.1: Pre Merger Ratio Analysis of SISCOL



Source: Table 8.6.3

Table 8.6.4 examines the relationship between the Pre Merger Profitability and ICR of SISCOL with JSW's Post Merger results.

1. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger Profitability of SISCOL and Post-merger Profitability of JSW Steel**
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger Profitability of SISCOL and Post-merger Profitability of JSW Steel

The correlation coefficient (r) between X and Y that is the Pre-merger profitability of SISCOL and Post Merger profitability of JSW is 0.82 which reflects a high degree of positive correlation. The coefficient of determination (r^2) is also high at 0.6724 indicating that a high percentage of variance is explained by this relation. The regression equation Y on X shows that for every unit change in X that is the pre-merger profitability the Post Merger profitability is affected by 2.01 units. The intercept is also high at 9.85 indicating the presence of other factors. The relation is tested for statistical significance and it gives the t value at 0.07 when three years of pre and Post Merger are undertaken. The table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value being less than the table value leads to the conclusion that the relation is statistically insignificant. **The Null Hypothesis is accepted and the Alternative Hypothesis is rejected** and the inference is that there is no relation between the Pre-Merger Profitability of SISCOL with the Post Merger profitability of JSW. Further when five years of pre-merger and three years of Post Merger are undertaken the value of t is worked out as 1.08. The table value of t when v=6 at $t_{0.05}$ is 2.45. The calculated value is again less than the table value leading to the conclusion the relation is statistically insignificant. **The Null Hypothesis is accepted** stating that there is no relation between the Pre and Post Merger Profitability.

2. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger ICR of SISCOL and Post-merger ICR of JSW Steel**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger ICR of SISCOL and Post-merger ICR of JSW Steel

Further the relation between the Pre Merger ICR of SISCOL and Post Merger ICR of JSW Steel is examined. The correlation coefficient (r) is 0.98 which indicates a very high degree of positive correlation. The coefficient of determination (r^2) is also very high at 0.9604 indicating that the pre-merger statistics plays an important in determining the Post Merger figures. The regression equation show that for every unit change in X that is the pre-merger ICR of SISCOL the post merger ICR of JSW is moved by 1.43 units. The intercept is at 1.82. The t-value is calculated as 2.16 while the calculated value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value being lesser than the table value leads to the acceptance of the Null Hypothesis and rejection of the Alternative Hypothesis. Hence there is no relation between the Pre Merger ICR of SISCOL and Post Merger ICR of JSW Steel. Further the t value is calculated for five years of Pre-merger and three years of Post Merger which gives the t-value at 3.12. The table value of t when v=6 at $t_{0.05}$ is 2.45. The calculated value being more than the table value leads to the conclusion that the data is statistically significant and the **Alternative Hypothesis is accepted** stating that there is a relation between the Pre Merger ICR of SISCOL and Post Merger ICR of JSW Steel.

Table 8.6.4: Pre and Post Merger Analysis of Profitability and ICR of SISCOL and JSW

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
1. X= Pre-Merger Profitability of SISCOL Y=Post-Merger Profitability of JSW Steel	=0.82	0.6724	Y on X is Y=2.01X-9.85	t=0.07* t=1.08**
2. X= Pre-Merger ICR of SISCOL Y=Post-Merger ICR of JSW Steel	=0.98	0.9604	Y on X is Y=1.431X+1.82	t=2.16* t=3.12**

*Three Years of Pre and Post Merger Undertaken
**Five Years of Pre Merger and Three Years of Post-Merger Undertaken
Source: Compiled and Calculated from Table 8.6.3 and 8.6.9

3. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger EPS of SISCOL and Post-merger EPS of JSW Steel**
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger EPS of SISCOL and Post-merger EPS of JSW Steel

Table 8.6.5 explores the relationship between the Pre-merger EPS of SISCOL and Post-merger EPS of JSW. It gives the correlation coefficient (r) as 0.86 which is a high degree of positive correlation. The coefficient of determination (r^2) is 0.733 which signifies that the Post Merger MPS has a strong relation with the Pre Merger EPS. The regression equation further explains this relationship. It shows that for every one unit change in the Pre Merger EPS of SISCOL, the Post Merger EPS of JSW is affected by 16.03 units. The intercept is also high at 15.16 indicating the presence of other factors as well. The relation is further tested for statistical significance for which t test is done. The value of t is computed as 2.79 when three years of Pre and Post Merger are undertaken. The table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value being more than the table value leads to the conclusion that the relation is statistically significant. The Alternative Hypothesis is accepted stating that there is a relation between the Pre Merger EPS of SISCOL and the Post Merger EPS of JSW Steel. When the t value is calculated for five years of Pre Merger and three years of Post Merger the t value is calculated as 3.74 while the table value of t when v=6 at $t_{0.05}$ is 2.45. The calculated value is more than the table value even at in the longer run.

It again leads to rejection of the Null Hypothesis and acceptance of the Alternative Hypothesis. Hence there is a relation between the Pre Merger EPS of SISCOL and Post Merger EPS of JSW Steel.

Table 8.6.5: Pre and Post Merger Analysis of EPS of SISCOL and JSW

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	*T-test
3. X=Pre-Merger EPS of SISCOL Y=Post Merger EPS of JSW Steel	0.86	0.733	Y on X is Y=16.03X+15.16	t=2.79* t=3.94**

*Three Years of Pre and Post Merger undertaken
**Five years of Pre-merger and Three years of Post Merger taken
Source: Compiled and Calculated from Appendix 8 and Appendix 10

The analysis of SISCOL reveals that the losses were converted into profits in 2004 and the two undertakings were subsequently merged in 2008 and SISCOL got benefit of with the help of core competencies of JSW. The Hypothesis testing reveals that the Pre Merger Profitability and ICR of SISCOL did not have an impact on the Post Merger Profitability and ICR of SISCOL. The Post Merger ICR of JSW had a relation with the Pre Merger ICR of SISCOL when five years of Pre Merger and three years of Post Merger were undertaken. However the study of the Pre Merger EPS of SISCOL and Post Merger EPS of JSW Steel appear to have a relation revealing that the shareholders were affected. The degree of correlation is a high degree of positive correlation at 0.86. Thus we see that the association with JSW Steel had converted a loss making unit into a profitable venture

b) JSW Steel

JSW Steel was earlier known as Jindal Vijayanagar Steel Limited (JVSL) and it was started in 1994. It stands today as one among the largest Indian Steel Companies with a capacity of 7.8 million tones. SISCOL was acquired under a scheme of amalgamation which added 1 MTPA of production capacity which made it the second largest steel company in the private sector in India[15].

Pre-Merger Analysis

The year 2000 saw the Net turnover at Rs 807.33 crores against an expenditure of 656.41 crores. The DER was on the higher side at 4.15 while the low CR spelled liquidity problems at 0.58. The FATR and ICR were very low at 0.54 and 0.29 respectively. The company was running into losses at -18.35 percent. In 2001 the turnover increased by 43.76 percent and expenditure by 32.35 percent. DER notched up further to 4.51, CR to 0.71 and ICR to 0.78. The improvement was reflected in the results with losses falling to -4.28 percent. The year 2002 saw turnover rise by another 49.56 percent against a 62.89 percent increase in cost of sales. DER rose to 6.98 signaling influx of debt. The CR was at 0.96 while the FATR dropped down to 0.44. ICR was very low at 1.18 but losses again soared to -20.23 percent with the MPS also falling to Rs 2. For the financial year 2003 the Net Turnover was at Rs 2504.76 crore and the cost of sales was at Rs 1796.7 crore which was a 44.30 percent and 26.98 percent increase respectively. The DER was on the higher side at 4.39. The CR was also low for comfort at 0.91. The FATR also did not reflect well on the operations at 0.44 while ICR was high at 0.66.

The year 2004 for JSW saw the Net Turnover rise by 30.94 percent against a rise of 23.51 percent increase in cost of sales. The DER lowered down but was still on the higher side at 2.93. The CR improved to 1.12 and so did the FATR and ICR to 0.63 and 1.73 respectively. Most importantly profits were registered which accounted for 16.12 percent. The year was indeed a turnaround for the operations of the company with sales rising and control being visible in the cost of operations. It resulted in wiping 80 percent of the accumulated losses as well. The year 2005 witnessed the turnover becoming more than double at 103.65 percent while the cost of sale grew by 90.38 percent. The DER lowered further to 1.13 while the CR was stable at 1.15. The FATR moved up to 1.04 and ICR to 4.14 which reflected efficiency in operations and liquidity. The profits dropped down marginally to 13.03 percent. There was a phenomenal jump in 2005 to Rs 360.55.With lowering of debt in the capital structure the financial expenses also went down. This year also marked the creation of India's third largest Integrated Steel manufacturer with the merger between JSW Steel and Jindal Iron and Steel being approved by the High Court.

In the year 2006 the turnover declined by -7.48 percent while the cost of sales rose by a marginal 1.93 percent. Proportion of debt further reduced with the DER at 0.94. The

CR was however stable at 1.18. The FATR also fell down to 0.74 reflecting that there was a drop in utilization of fixed assets. The ICR moved up further to 4.61. Level of profit was however relatively the same at 13.99 percent. This year the company underwent a merger with Euro Ikon Iron and Steel Pvt. Ltd., (Euro Ikon), Euro Coke and Energy Pvt. Ltd. (Euro Coke). The expansion plans of JSW Steel were evident. However the operational efficiency was commendable where profitability was maintained even when the cost of input was steadily increasing. The year 2007 again saw the turnover registering an increase of 38.42 percent, while the cost of sales increased by 30.08 percent. The capital structure became further equity based with DER falling to 0.75. The CR also dropped marginally to 1.09 while the FATR improved to 0.84 and ICR to 5.79. The profits were recorded slightly higher at 15.1 percent.

Post-Merger Analysis

The expansion spree of JSW Steel continued with the amalgamation with Southern Iron & Steel Company (SISCOL). The financial results for this year hence include the results of SISCOL as well. The expansion had led to marked increase in the level of production and volume. Various cost control measures were also proving to be effective despite the rise in the cost of inputs. The sales rose by 33.50 percent against a 39.08 percent rise in cost of sales. The DER rose to 0.98 which was reasonable. The CR and FATR declined to 0.75 and 0.69 respectively while ICR continued to rise to 6.40. The profits were stable at 15.13 percent. In the first year after the merger the MPS increased by another 66 percent showing that the market had responded positively to the merger with SISCOL though there might be other factors involved also.

For the financial year 2009 where economies worldwide were in the grip of recession the rate of increase in sales increased by 22.60 percent against an increase of 39.63 percent in cost of sales. The DER rose to 1.42 which reflected an increase in the debt composition but it was still under the ideal 2:1 mark. Liquidity worsened with CR at 0.61 and ICR to 2.84 but liquidity problem was mainly due to the recession that had struck the world economy. The FATR was also relatively stable at 0.63 while profitability dropped to 3.28 percent. A clever change of strategy was made where the domestic market was targeted in the wake of global recession and it yielded results too. The company was able to earn profits in a year when the world steel production contracted by 25 percent due to cut in production and demand. The year 2010 is studied for the first nine months. Sales were lesser by 0.81 percent but the whole year is not considered here. The DER was 1.53 and ICR at 5.06. A very healthy profit at 9.4 percent accrued which was very encouraging.

Table 8.6.6: Pre and Post-Merger Turnover of JSW Steel (2000-2010)

(Figures in Rs Crore)

Pre-merger			**Post-merger**		
Year	**Net Turnover**	**Percentage Increase over Previous year**	**Year**	**Net Turnover**	**Percentage Increase over Previous Year**
2000	807.33		2008	11420	33.50
2001	1160.60	43.76	2009	14001.25	22.60
2002	1735.75	49.56	2010 (nine months)	13887.24	-0.81
2003	2504.76	44.30			
2004	3279.78	30.94			
2005	6679.36	103.65			
2006	6180.1	-7.48			
2007	8554.36	38.42			

Source: Compiled and Calculated from the Annual reports of JSW Steel from 2000 to 2009. Retrieved from http://www.moneycontrol.com/financials/jswsteel/balance-sheet/JSW01 and http://www.jsw.in/

Table 8.6.7: Pre- Merger and Post-Merger Cost of Sales of JSW (2000-2010)

(Figures in Rs Crore)

	PRE-MERGER			POST-MERGER	
Year	Cost of Sales	Percentage increase over previous year	Year	Cost of Sales	Percentage increase over previous year
2000	656.41		2008	7791.42	39.08
2001	868.77	32.35	2009	10879.39	39.63
2002	1415.15	62.89			
2003	1796.97	26.98			
2004	2219.39	23.51			
2005	4225.3	90.38			
2006	4306.75	1.93			
2007	5602.15	30.08			

Source: Compiled and Calculated from the Annual reports of JSW Steel from 2000 to 2009. Retrieved from http://www.moneycontrol.com/financials/jswsteel/balance-sheet/JSW01 and http://www.jsw.in/

Table 8.6.8: Pre- Merger Ratio Analysis of JSW (2000-2007)

Pre Merger					
Year	**Debt Equity Ratio (DER)**	**Current Ratio (CR)**	**Fixed Assets Turnover Ratio (FATR)**	**Interest Coverage Ratio (ICR)**	**Profitability (%)**
2000	4.15	0.58	0.54	0.29	-18.35
2001	4.51	0.71	0.77	0.78	-4.28
2002	6.98	0.96	0.44	0.18	-20.23
2003	4.39	0.91	0.44	0.66	-4.41839
2004	2.93	1.12	0.63	1.73	16.11937
2005	1.13	**1.15**	1.04	4.14	13.02685
2006	0.94	1.18	0.74	4.61	13.98505
2007	0.75	1.09	0.84	5.79	15.10341

Source: Compiled and Calculated from Table 8.6.6, Appendix 9 and Appendix 10

Table 8.6.9: Post-Merger Ratio Analysis of JSW (2007-2009)

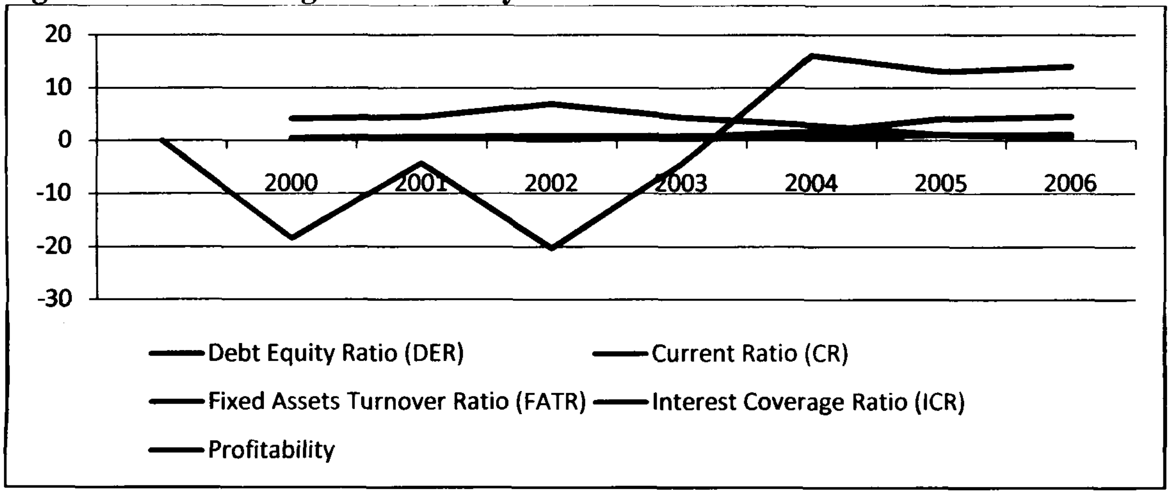
Post Merger					
Year	**Debt Equity Ratio (DER)**	**Current Ratio (CR)**	**Fixed Assets Turnover Ratio (FATR)**	**Interest Coverage Ratio (ICR)**	**Profitability (%)**
2008	0.98	0.75	0.69	6.40	15.13301
2009	1.42	0.61	0.63	2.84	3.274708
2010	1.53*	NA	NA	5.06**	9.4**

*Figure for Q_3

**Figure for 9 months

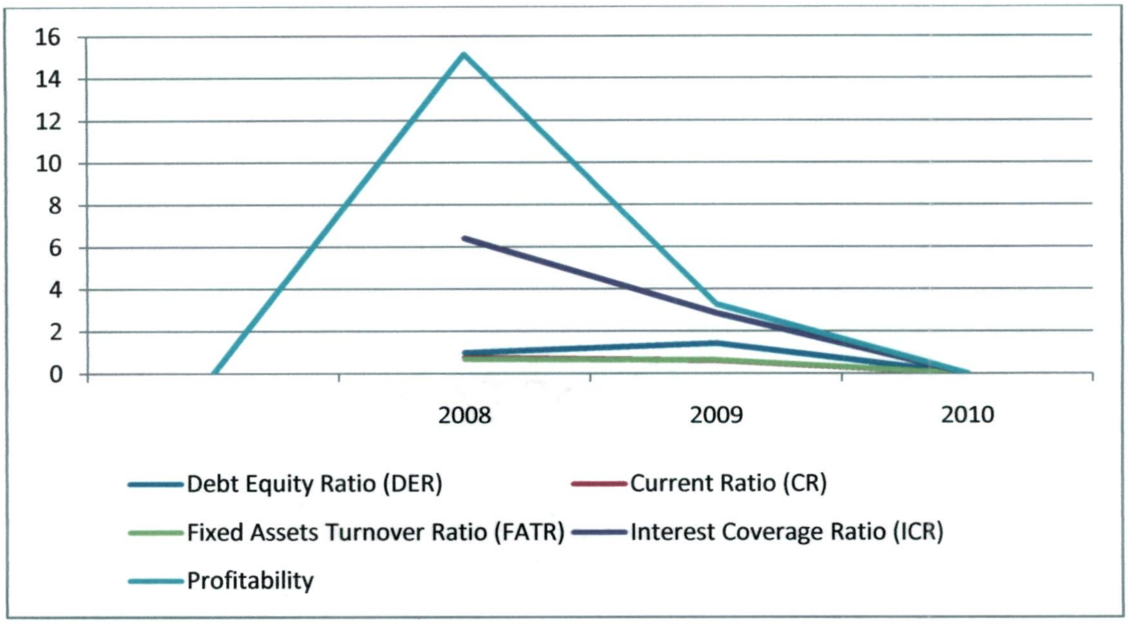
Source: Compiled and Calculated from Table 8.6.6, Appendix 9 and Appendix 10

Figure 8.6.2: Pre Merger Ratio Analysis of JSW Steel



Source: Table 8.6.8

Figure 8.6.3: Post Merger Ratio Analysis of JSW Steel



Source: Table 8.6.9

Testing of Hypothesis

1. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profitability of JSW Steel**
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profitability of JSW Steel

Table 8.6.10 highlights the relationship between the Pre and Post Merger Profitability. The correlation coefficient (r) is at -0.44 indicating a negative degree of moderate correlation. The coefficient of determination (r^2) is very low at 0.1936 which shows that a very small percentage of Post Merger profitability is affected by the Pre Merger Profitability. The regression equation shows that for every unit change in X that is the Pre Merger profitability, the Post Merger profitability that is Y is affected by -2.53 units. The intercept is very high at 44.83 indicating that when the slope is zero, the Post Merger Profitability is 44.83 indicating the strong effect of other factors. The value of t is calculated as 0.85 when three years of Pre and Post Merger are undertaken. The table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value is less than the table value which leads to the conclusion that the relation is statistically insignificant. **The Null Hypothesis is accepted** which says that there is no relation between the Pre and Post Merger Profitability. Further when the t value is computed for a longer period that is Eight Years of Pre Merger and three years of Post Merger it comes out to be 1.413. The table value of t when v=9 at $t_{0.05}$ is 2.26. The calculated value is again less than the table value which again leads to the inference that the relation is statistically insignificant and the **Null Hypothesis is accepted while the Alternative Hypothesis is rejected.** Hence there is no relation between the Pre and Post Merger Profitability of JSW Steel.

2. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger ICR of JSW Steel**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger ICR of JSW Steel

Table 8.6.10 also examines the relationship between the Pre and Post Merger ICR of JSW Steel. The correlation coefficient (r) comes out to be -0.14 which indicates a low degree of negative correlation. The coefficient of determination (r^2) is also very low at 0.0196 indicating that a very small percentage of the variance is explained by this relation. The regression equation shows that for every unit change in X that is the Pre-merger Profitability of JSW the Post Merger Profitability is affected by -0.29 units. The intercept is high at 6.18 indicating the effect of other factors in the movement of Post-merger Profitability.

The relation is further tested for statistical significance which gives the t value at 0.07. The table value of t when v=4 at $t_{0.05}$ is worked out as 2.78. The calculated value being less than the table value leads to the conclusion that the relation is statistically insignificant. **The Null Hypothesis is accepted and the Alternative Hypothesis is rejected.** Hence there is no relation between the Pre and Post Merger values. The t test is further conducted for eight years of Pre Merger and three years of Post Merger which gives the t value at 1.753. The table value of t when v=9 at $t_{0.05}$ is 2.26. The calculated vale being less than the table value leads to **rejection of the Alternative Hypothesis and acceptance of the Null Hypothesis.** Hence there is no relation between the Pre and Post Merger ICR of JSW Steel and the relation is statistically insignificant.

Table 8.6.10: Pre and Post Merger Analysis of Profitability and ICR of JSW

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
1. X= Pre-Merger Profitability of JSW Y=Post-Merger Profitability of JSW Steel	=-0.44	0.1936	Y on X is Y=-2.53X+44.83	t=0.85* t=1.413**
2. X= Pre-Merger ICR of JSW Y=Post-Merger ICR of JSW Steel	=-0.14	0.0196	Y on X is Y=-0.29X+6.18	t=0.07* t=1.753**

*Three Years of Pre and Post Merger Undertaken
**Eight Years of Pre Merger and Three Years of Post-Merger Undertaken
Source: Compiled and Calculated from Table 8.6.8 and 8.6.9

Table 8.6.11 explores the relationship between the profitability of the firm with its MPS. An attempt is made by the researcher to study their mutual relationship.

3. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger Profitability and Pre-merger MPS of JSW Steel**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger Profitability and Pre-merger MPS of JSW Steel

Table 8.6.11 explores the relationship between the Pre Merger Profitability and MPS. The correlation coefficient (r) comes out to be 0.68 indicating a moderate degree of positive correlation. The coefficient of determination (r^2) comes out to be 0.4624 implying that a fairly high percentage of the variance is explained by this relationship. The Regression equation X on Y shows that for every unit change in Y that is the Pre-merger MPS the value of X that is the Pre Merger Profitability is affected by 0.05 units while the intercept is high at 6.10 indicating the stronger effects of other factors other than the MPS. The equation Y on X indicates that for every unit change in X that is the Profitability there is a 9.09 unit's change in Y that is the MPS. Hence MPS is affected strongly by profitability while the vice versa is not true. The t test is also taken to find out the statistical significance. The t value comes out as 2.02 while the table value of t is when v=9 at $t_{0.05}$ is 2.37. The calculated value being lesser than the table value leads to the conclusion that the data is not statistically significant. **The**

Null Hypothesis is accepted while the Alternative Hypothesis is rejected. Hence there is no relation between the Pre Merger Profitability and MPS of JSW Steel.

4. **H_0 (Null Hypothesis) = There is no relation between the Post Merger Profitability and Post-merger MPS of JSW Steel**
   H_a (Alternative Hypothesis) = There is a relation between the Post Merger Profitability and Post-merger MPS of JSW Steel

Table 8.6.11 further examines the relationship between the Post Merger Profitability and MPS of JSW Steel. The correlation coefficient (r) is worked out as 0.71 indicating a moderate degree of positive correlation while the coefficient of determination (r^2) is 0.5041 showing that half of the variance is explained by this relation. The Regression equation X on Y shows that for every unit change in Y that is the Post Merger MPS of JSW the value of X that is the Post Merger Profitability is affected by 0.098 unit's which is very low. The value of intercept is high at 2.38 representing the role of other factors. The regression equation Y on X shows that for every unit change in X that is the Post merger Profitability, the Post Merger MPS is moved by 49.84 units. The value of intercept is very high at 238.75 units showing the dominant effect of other factors. The value of t is computed as 2.85 while the table value of t when v=9 at $t_{0.05}$ is 2.37. The calculated value being more than the table value leads to the conclusion that the data is statistically significant. **Null Hypothesis is rejected and Alternative Hypothesis is accepted.** Hence there is a relation between the Post Merger Profitability and MPS

Table 8.6.11: Pre and Post Merger Analysis of MPS and Profitability of JSW

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	*T-test
3. X=Pre-Merger Profitability of JSW Steel Y=Pre Merger MPS of JSW Steel	r=0.68	0.4624	X on Y is X =0.051Y-6.10 Y on X is Y=9.09X+135.06	2.02*
4. X=Post-Merger Profitability of JSW Y=Post Merger MPS of JSW	r=0.71	0.5041	X on Y is X=0.098Y+2.38 Y on X is Y=49.84X+238.75	2.85**

*Eight Years of Pre Merger taken
**Three Years of Post Merger taken
Source: Compiled and Calculated from Table 8.6.8, 8.6.9 and Appendix 10

5. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger MPS and Post-merger MPS of JSW Steel**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger MPS and Post-merger MPS of JSW Steel

Table 8.6.12 examines the relation between the Pre and Post Merger MPS of JSW Steel. The correlation coefficient (r) comes out to be 0.89 which represents a high degree of positive correlation. The coefficient of determination (r^2) is also high at 0.796 reflecting that the relation explains a majority of the variance. The equation Y on X shows that for every one unit change in X that is the Pre-merger MPS the Post Merger MPS is affected by 3.85 units. The intercept is also very high at 784.86 indicating that there is a strong role of other factors. The value of t is computed as 1.28 when three years of Pre and Post Merger are considered. The table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value is less than the table value which leads to the conclusion that the data is statistically insignificant. The Null Hypothesis is accepted and the Alternative Hypothesis is rejected. It is concluded that there is no relation between the Pre and Post Merger MPS. Further the t-value is calculated for eight years of Pre Merger and three years of Post Merger which gives the t value as 3.05. The table value of t when v=9 at $t_{0.05}$ is 2.37. The calculated value is more than the table value which leads to the conclusion that the data is statistically significant. The Null Hypothesis is rejected and the alternative Hypothesis is accepted. Hence in the longer run the merger has an effect on the Post Merger MPS.

6. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger EPS and Post-merger EPS of JSW Steel**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger EPS and Post-merger EPS of JSW Steel

Table 8.6.12 further explores the relationship between the Pre and Post Merger MPS of JSW Steel. The correlation coefficient (r) is 0.51 which is a moderate degree of positive correlation. The coefficient of determination (r^2) is .2632 which means that a quarter of the movement of variances in the relationship is explained. The regression equation Y on X shows that for every unit change in X that is the pre-merger MPS the value of Y that is the Post Merger MPS is affected by 1.52 units. The value of intercept is also high at -39.67 indicating the role of other factors. Further the t test is conducted. The value of t for three years of Pre and Post Merger is worked out to be

0.22. The table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value is less than the table value which leads to the conclusion that the data is statistically insignificant. **The Null Hypothesis is accepted while the Alternative Hypothesis is rejected.** Hence there is no relation between the Pre and Post Merger EPS. Further the t values are calculated for eight years of Pre Merger and three years of Post Merger. The t value comes out to be 3.50. The table value of t when v=9 at $t_{0.05}$ is 2.37. The calculated value is more than the table value which leads to the conclusion that the relation is statistically significant. **The Null Hypothesis is rejected while the Alternative Hypothesis is rejected.** Hence there is a relation between the pre and Post Merger EPS in the longer run.

Table 8.6.12: Pre and Post Merger Analysis of MPS and EPS of JSW Steel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	*T-test
5. X=Pre-Merger MPS of JSW Y=Post Merger MPS of JSW	r=0.89	0.796	Y on X is Y=3.85X-784.86	t=1.28* t=3.05**
6.X=Pre-Merger EPS of JSW Y=Post Merger EPS of JSW	r=0.51	0.2638	Y on X is Y=1.52X-39.67	t=0.22* t=3.50**

*Three years of Pre and Post Merger taken
**Eight years of Pre-merger and Three years of Post Merger taken
Source: Compiled and Calculated from Appendix 10

7. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profit Margin**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profit Margin

8. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profit Rate**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profit Rate

Table 8.6.13 explores the Pre and Post Merger Profit Margin and Profit Rate for SISCOL and JSW. The Pre Merger Profit Margin for SISCOL is -0.65 while for JSW it is 0.014. The Post Merger Profit Margin of JSW Steel is 0.903 reflecting a significant improvement in the Post Merger Profit Margin. Further the Post Merger Profit Rate is examined. It gives the Pre Merger Profit Rate for SISCOL as -0.02 while for JSW as 0.0315. The Post-merger Profit Rate of JSW is calculated as 0.055 which again shows a marked improvement over the Pre Merger figures.

Table 8.6.13: Pre and Post Merger Profit Rate and Profit Margin for SISCOL and JSW Steel

	Net Sales **Profit Margin= PAT. / NS**			**Total Assets** **Profit Rate= PAT. / TA**		
	Pre-merger Average	**Post-merger Average**	**Percentage Change**	**Pre-merger Average**	**Post-merger Average**	**Percentage Change**
7. SISCOL	-0.65	NA		-0.02	NA	
8. JSW	0.014	0.903	635	0.0315	0.055	74.6

Source: Compiled and Calculated from Table 8.6.1, 8.6.6, Appendix 8, Appendix 9 and Appendix 10

After running into losses for years JSW Steel finally made a turnaround in its operations in 2004 and started making profits on a consistent basis. There is no relation between the Pre and Post Merger profitability on the basis of the test applied. However the benefits of merger are not expected to accrue in the first few years. The analysis of the relation between the profitability and MPS reveals that the relation between the Pre Merger profitability and MPS is insignificant. The relation between the Post Merger Profitability and MPS is on the contrary found to be significant with the correlation coefficient (r) high at 0.71. The value of Profitability is affected by 0.098 units for a unit change in MPS while the MPS is affected by 49.84 units for a change of a unit in Profitability. The intercept is also high at 238.75. The relation between the Pre Merger EPS and MPS with the Post Merger EPS and MPS is also found to be significant only in the longer run. The Profit Margin for JSW Steel increased by 635 percent and Profit Rate the by 74.6 percent. The losses incurred prior to 2004 are also responsible for this huge change in Profit Margin.

8.7 Conclusion:

The analysis presented in the foregoing paragraphs examines the Pre and Post Merger financials of the firm involved in a Mergers and Acquisitions (M&A's) deal and analyses whether the merger had a positive, negative or limited effect on the performance. It is seen that SAIL merged its subsidiaries which were running into losses and enhanced its operational capacity and got tax incentives at the same time. The takeover of Bellary Steels by Pittsburgh which was done in order to enter steel segment seemed to lead both the entities nowhere where the losses continued. IMFA carried out the merger of its subsidiary ICCL with itself and became a leading player in the business and benefitted from significant financial and operating synergies. In the case of JSW and SISCOL deal we see that while JSW benefitted from increased production facilities SISCOL made a significant turnaround in operations which converted its losses into profits

Having discussed five significant domestic Mergers and Acquisitions (M&A's) in the domestic sector the succeeding chapter moves on to analyze three major cross border deals that have taken place and also examines the rationale and benefits accruing to the Indian steel companies out of the merger and takeover in the international scene.

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Chapter 9

Analysis of International Mergers and Acquisitions (M&A's): (Indian Steel Industry vis-a-vis International Steel Industry)

9.1 Introduction

9.2 NatSteel and Tata Steel: Pre and Post Merger Performance Assessment

9.3 Corus and Tata Steel: Pre and Post Merger Performance Assessment

9.4 Algoma Steel and Essar Steel: Pre and Post Merger Performance Assessment

9.5 Conclusion

9.6 References

Chapter 9

Analysis of International Mergers and Acquisitions (M&A's): (Indian Steel Industry vis-a-vis International Steel Industry)

9.1 Introduction:

The preceding chapter dealt with the major Mergers and Acquisitions (M&A's) in the domestic sector that is the deals between the local companies of India. The financial aspects related to the merger have been discussed in detail to assess the viability and impact of the merger or acquisition. On the basis of the same methodology as designed in Chapter 6, the Researcher analyses three major cross border deals in the steel sector which have put us on the world map. In the recent years huge deals amounting to billions of dollars are being inked. Tata took over NatSteel and followed it with the takeover of Corus which was the largest ever takeover by an Indian corporate then. Essar Steel also went on to acquire the Canadian company Algoma Steel. It is interesting to examine the financials of the companies involved in the merger in the midst of all the hype created around the announcement of the merger or takeover. The growth of the Indian corporate from being acquired by foreign companies to a position where it is making significant deals across the globe is indeed commendable. The analysis of major cross border mergers and acquisitions in steel sector is presented in the following paragraphs.

9.2 *NatSteel and Tata Steel: Pre and Post Merger Performance Assessment*

a) NatSteel

The National Iron and Steel Mills Ltd (NISM) was incorporated on 12 August 1961 and in 1990 its name was changed to NatSteel. The NatSteel Group having divisions in Steel, Industrial and Electronics is headquartered in Singapore. For the purpose of this analysis the figures of NatSteel Group is undertaken to analyze the effect of merger on it. NatSteel being one of the largest countries in Asia Pacific and having a presence in seven countries gave access to Tata Steel in this area. NatSteel Holdings is headquartered in Singapore and is a leading supplier of premium steel. It became 100 percent subsidiary of Tata in 2004 and a formidable combination was created to explore new markets and opportunities. NatSteel announced on 16 August 2004 about its decision to sell its steel business to Tata Steel for $486.4 million.

Pre-Merger Analysis

Tables 9.2.1, 9.2.2 and 9.2.3 provide a detailed description of the Pre merger analysis is done. In the financial year 2000 the total sales stood at S$ 1440714 mainly relying on electronic division which led to the Net Profit (NP) to stand at a remarkable 65.92 percent. The cost of sales was at S$ 1256546. The CR at 1.54, FATR at 1.13 and WCTR at 2.1 were all impressive and satisfactory. The DER was however very low at 0.02 indicating that that the business was primarily based on equity. The weak construction sector was adversely hampering the prospects of the steel sector. However, the trend was expected to reverse in the near future. Besides three new steel products were launched NS500, NEW500 and NEF500 and the division also got ISO14001 certification. PBT stood at S$ 24.9 m which was low. The increasing cost and lower selling price were not helping its cause with a weak domestic market adding to its woes. The year 2001 saw the sales jump by 10.04 percent as compared to a 15.34 percent increase in cost of sales. The CR and FATR marginally changed to 1.43 and 1.55 while the DER was still low at 0.12. However WCTR rose sharply to 6.35 indicating higher trading and lower investment in working capital. A loss of 7.88 percent was reported which was a cause of worry. With the macro-environment reflecting a sluggish economy, various initiatives were taken by the group to consolidate and compete. The cost involved in the rationalization of operations of the steel division was a major reason for the loss reported in the steel division to the tune of S$21.3 million.

The financial year 2002 saw sales jump by 9.68 percent while cost of sales increased by 7.07 percent only. The liquidity improved with CR at 2.45 while the FATR and WCTR were at 3.00 and 2.37. DER was at 0.02. The NP at 10.56 percent was most remarkable and satisfactory. However with a negative outlook for building and construction activity in Singapore, the future does not look very bright for the steel division. The Iraq war and rising oil prices were also expected to cast a negative effect. The steel division registered a smart recovery to post a Profit before Tax (PBT) of S$ 25.9 million which mainly came from higher trading volume of NatSteel trade and also the overseas steel operations. The restructuring operations undertaken in 2001 were yielding positive results in the form of better selling price, reduced cost and overall efficient operations.

Trouble was brewing at NatSteel in the year 2003 with sales decreasing by 1.22 percent and cost of sales increasing marginally by 1.03 percent. The Iraq wars and SARS outbreak had certainly negatively influenced the macro-environment but still the operations were fairly stable with CR at 2.29, FATR at 3.13 and WCTR at 3.54. The proportion of loan funds continued to be low with the DER at 0.04.The NP was positive at 4.67 percent. The overseas steel business benefitted from the rising steel prices in the world market which resulted in a remarkable 84 percent jump in PBT of steel division to S$46.8 million. However lower demand was forecasted in the domestic market. In 2004, sales increased by 20.74 percent while cost of sales increased by 22.1 percent. The ratios also reflected stability with CR at 2.8, FATR at 3.67 and NP at 5.90 percent. The WCTR and DER did not change much at 3.66 and 0.03 respectively. For the improved performance the credit was to the steel, petrochemical and electronic division. The PBT of steel division had jumped by 49 percent to S$ 46.8 million with improved market conditions both in Singapore and overseas.

However on 16 August 2004, the company announced that it would sell its steel and related businesses to Tata Iron and Steel Company at a value of $486.4m. Hence, we see that in this case it was a profitable company that was being acquired.

Post-Merger Analysis

From the calculations above in Tables 9.2.1, 9.2.2, 9.2.3 and 9.2.4 the post-merger analysis has been done.

In the financial year 2005, the sales of NatSteel was at Singapore $303614 while the cost of sales was at Singapore $ 244309. The liquidity position was satisfactory with CR at2.16 while FATR and WCTR were at 0.88 and 1.53 respectively. DER was again extremely low at 0.07. The NP at 32.26 percent was highly impressive reflecting upon the profitable operations of the undertaking where the petrochemical division had a significant role. Higher cash reserves were attributed to the receipt of cash from the sale of steel division to Tata Steel.

The growth story remained intact for NatSteel for the year 2006 as well with turnover increasing by 5.33 percent as compared to increase in cost of sales by 8.9 percent. CR at 2.06 reflected that there was adequate liquidity, FATR at 1.06 showed the efficient usage of fixed assets and WCTR at 1.86 was also fairly stable. DER remained the same at 0.07. The highlight was however the profits at 43.94 percent.

The year 2007 saw turnover rising by an impressive 8.06 percent as compared to a 4.45 percent rise in cost of sales. Liquidity was comfortable with CR at 2.75 while the FATR and WCTR were fairly stable at 1.01 and 1.50 respectively. DER fell further to 0.03.and NP to 29.07 percent. This year was marked by an innovative drive with expansion in customers and products being undertaken. However both chemical and engineering division experienced a lower profit contribution which was in turn affected by a weak US$ and higher operating cost. For the year 2008 the sales rose by another 3.55 percent against a 4.67 percent increase in cost of sales. The debt proportion was minimal with the DER at 0.04 while CR was more than satisfactory at 2.56. The FATR was stable at 1.11 and WCTR was at 1.53. The profitability was at 21.07 percent amid a glum economic outlook.

The recessionary trend had an impact on NatSteel too with sales falling by -1.51 percent in 2009 but cost fell more at -5.39 percent. The worldwide demand was facing a beating with the liquidity crisis in USA. DER continued to languish at 0.03 while CR rose to 3.05. The FATR fell to 0.97 while the WCTR rose to 1.87. The NP fell to 18.98 percent but amidst the economic downturn the management must be more than happy to maintain that

It is seen from the above analysis that the financial profile of NatSteel was significantly affected after the sale of its steel division. The rate of profits increased significantly. The year before the acquisition a profit of 5.90 percent was recorded while immediately after the deal a profit of 32.26 percent was registered. The many fold increase was symbolic of the positive effect the deal had on the financials of NatSteel.

Table 9.2.1: Pre and Post Merger Sales of NatSteel (2001-2004)

Figures in Singapore Dollar (S$)

Pre-merger			Post-merger		
Year	Sales	Percentage Change (%)	Year	Sales	Percentage Change (%)
2000	1440714	-	2005	303614	-
2001	1585395	10.04	2006	319786	5.33
2002	1738903	9.68	2007	345570	8.06
2003	1717735	-1.22	2008	357834	3.55
2004	2073987	20.74	2009	352424	-1.51

Source: Compiled and Calculated from NatSteel Annual Reports 2000 to 2009. Retrieved from http://www.nsl.com.sg/financialresults.html

Table 9.2.2: Pre and Post Merger Cost of Sales of NatSteel (2001-2004)

Figures in Singapore Dollar (S$)

Pre-merger			Post-merger		
	Cost of sales	% change	Year	Cost of sales	% change
2000	1256546	-	2005	244309	-
2001	1449331	15.34	2006	266066	8.9
2002	1551734	7.07	2007	278449	4.65
2003	1567709	1.03	2008	286685	2.96
2004	1914188	22.1	2009	271244	-5.39

Source: Compiled and Calculated from NatSteel's Annual Reports 2000 to 2009. Retrieved from http://www.nsl.com.sg/financialresults.html

Table 9.2.3: Pre-merger Ratio Analysis NatSteel (2001-2004)

Year	Debt Equity Ratio (DER)	Current Ratio (C.R)	Fixed Assets Turnover Ratio (FATR)	Working Capital Turnover Ratio (WCTR)	Net Profit Ratio (N.P) (%)
2000	0.02	1.54	1.13	2.15	65.92
2001	0.12	1.43	1.55	6.35	-7.88
2002	0.02	2.45	3.00	2.37	10.56
2003	0.04	2.29	3.13	3.54	4.67
2004	0.03	2.80	3.67	3.66	5.90

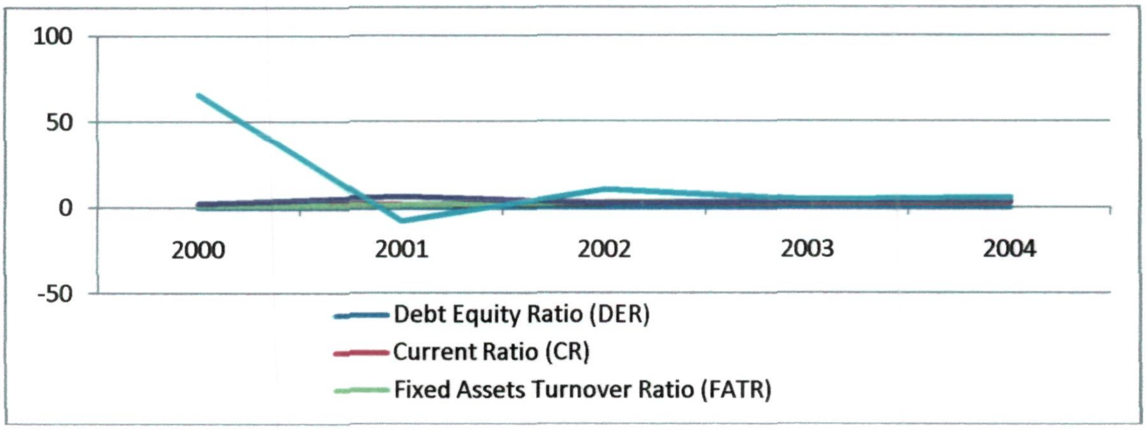
Source: Compiled and Calculated from Table 9.2.1, Appendix 19 and Appendix 20

Table 9.2.4: Post-merger Ratio Analysis NatSteel (2005-2009)

Year	Debt Equity Ratio (DER)	Current Ratio (C.R)	Fixed Assets Turnover Ratio (FATR)	Working Capital Turnover Ratio (WCTR)	Net Profit Ratio (N.P) (%)
2005	0.07	2.16	0.88	1.53	32.26
2006	0.07	2.09	1.06	1.86	43.94
2007	0.03	2.75	1.01	1.50	29.07
2008	0.04	2.56	1.11	1.53	21.07
2009	0.03	3.05	0.97	1.87	18.98

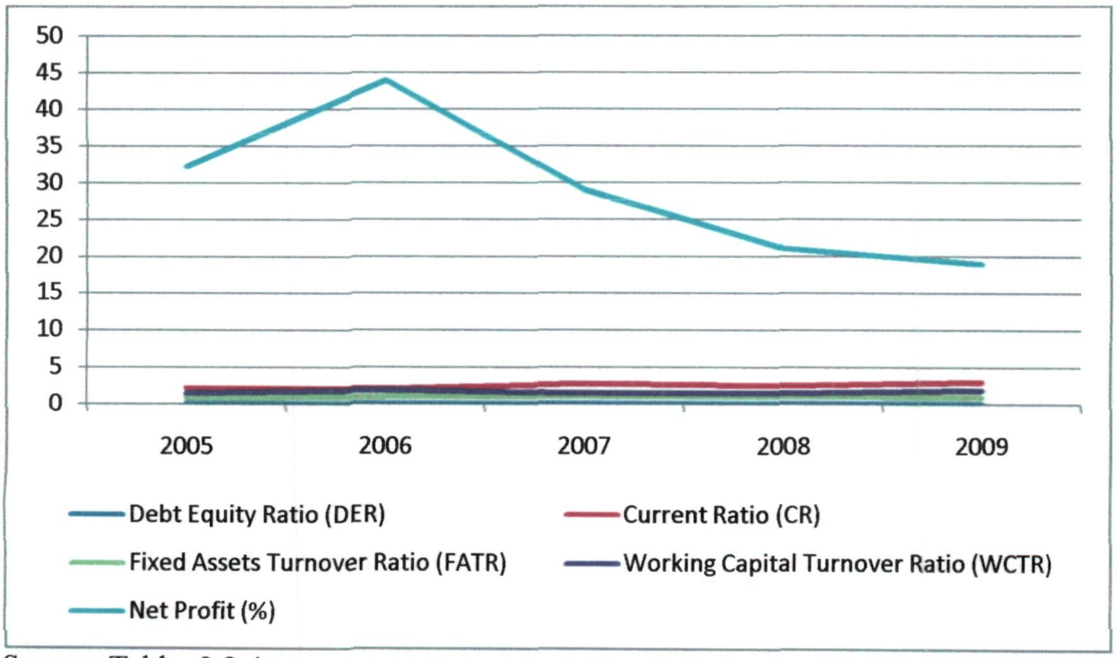
Source: Compiled and Calculated from Table 9.2.1, Appendix 19 and Appendix 20

Figure 9.2.1: Pre Merger Ratio Analysis of NatSteel



Source: Table: 9.2.3

Figure 9.2.2: Post Merger Ratio Analysis of NatSteel



Source: Table: 9.2.4

Table 9.2.5 deals with the Pre and Post merger analysis of Profitability, FATR and WCTR for NatSteel

1. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post -merger Profitability of NatSteel.**
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger and Post -merger Profitability of NatSteel.

The first Hypothesis studies the relationship between the pre and post merger profitability. The correlation coefficient (r) is worked out as -0.003 which is a low degree of negative correlation. The coefficient of determination (r^2) is 0.9^{-06} which signifies that a very low degree of variance is explained by this relation. The regression equation Y on X shows that for every unit change in X that is the Pre merger profitability of NatSteel there is -0.0001 units change in Y which is the post merger profitability of Tata Steel. The value of intercept is very high at 29.08 indicating the effect of other factors in determining the profitability. From the above figures it is seen that the merger does not seem to cause a major impact on the profitability of NatSteel .The t-value is worked out as 0.97 for five years of Pre and Post merger. The table value of t when v=8 at at$_{0.05}$ is 2.31. The calculated value is less than the table value which leads to the conclusion that the relation is statistically insignificant. The **Null Hypothesis is accepted and the Alternative Hypothesis is rejected.** Hence it is concluded that there is no relation between the pre merger and post merger profitability of NatSteel.

2. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post -merger FATR of NatSteel.**
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger and Post -merger FATR of NatSteel

This hypothesis examines the relationship between the pre and post merger FATR of NatSteel. The correlation coefficient (r) is worked out as 0.38 which is a low degree of positive correlation. The coefficient of determination (r^2) is 0.545 which shows that only a small part of the variance is explained by this relation. The regression equation Y on X shows that for every one unit change in X that is the pre merger FATR of NatSteel there is a 0.03 unit change in Y that is the post merger FATR of NatSteel. The intercept is also low at 0.933. The value of t is worked out as 3.03 for five years of pre and post merger while the table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value is more than the table value which leads to the inference that the relation is statistically significant and there is a relation between the pre merger and post merger values of Fixed Assets Turnover Ratio (FATR) for NatSteel. Hence the **Null Hypothesis is rejected while the Alternative Hypothesis is accepted.**

3. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post -merger WCTR of NatSteel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger and Post -merger WCTR of NatSteel.

The impact of the merger on the Working Capital Turnover Ratio (WCTR) of NatSteel is explored next. The correlation coefficient (r) between the pre merger and post merger WCTR is worked out as 0.76 which is a high degree of positive correlation while the coefficient of determination is (r^2) is 0.570. The regression Y on X shows that for every unit change in X that is the pre merger WCTR there is 0.09 units change in Y which is the post merger WCTR of NatSteel. The intercept is also low at 1.35. The t value is calculated as 2.60 for five years of pre and post merger. The table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value is more than the table value which means that the relation is statistically significant and it means that there is a relation between the pre-merger and post-merger WCTR. **The Null Hypothesis is rejected while the Alternative Hypothesis is accepted.**

The merger does not seem to have an effect on the profitability but the above discussion concludes that the operations of the concern on the form of FATR and WCTR seemed to be affected by the deal.

Table 9.2.5: Pre and Post Merger Analysis of Profitability, FATR and WCTR of NatSteel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	**T-test
1. X= Pre-Merger Profitability of NatSteel Y=Post-Merger Profitability of NatSteel	=-0.003	0.9^{-06}	Y on X is Y=-0001X+29.08	0.97
2. X= Pre-Merger FATR of NatSteel Y=Post-Merger FATR of NatSteel	=0.38	0.145	Y on X is Y=0.03X+0.933	3.03
3. X= Pre-Merger WCTR of NatSteel Y=Post-Merger WCTR of NatSteel	=0.76	0.570	Y on X is Y=0.09X+1.35	2.60

*Five Years of Pre and Post Merger Undertaken

Source: Compiled and Calculated from Table 9.2.3 and Table 9.2.4

Table 9.2.6 gives an insight into the relationship of the profitability of the firm with its MPS to examine the effect on each other.

4. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger Profitability and Pre -merger MPS of NatSteel.**
   H_a (Alternative Hypothesis) = There is a relation between the Post Merger Profitability and Post -merger MPS

The fourth hypothesis examines the relationship between the Pre merger profitability with the pre merger MPS. The correlation coefficient (r) is 0.78 which is a high degree of positive correlation. The coefficient of determination (r^2) at 0.604 reflects that a high degree of variance is explained by this relationship which is around 60.4 percent. The regression equation X on Y shows that for every unit change in Y that is the Pre merger MPS of NatSteel there is 94.55 units change in X that is the Pre merger profitability of NatSteel. The intercept is also high at 45.62 indicating the role of other factors. Further the regression equation Y on X shows that for every unit change in X that is the Pre merger profitability of NatSteel there is a 0.0064 unit's change in Y that is the Pre merger MPS of NatSteel. The intercept is also not very high at 0.55. Hence it seems that profitability is affected by a higher degree by MPS while the reverse is not true. The value of t test is computed as 1.18 for five years of Pre merger while the table value is when v=8 at $t_{0.05}$ is 2.31. The calculated value is less than the table value which leads to **acceptance of Null Hypothesis and rejection of Alternative Hypothesis**. Hence the relation is statistically insignificant and there is no relation between the Pre merger MPS and Profitability of NatSteel.

5. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger Profitability and Pre -merger MPS of NatSteel.**
   H_a (Alternative Hypothesis) = There is a relation between the Post Merger Profitability and Post -merger MPS

The next Hypothesis deals with the relationship between the Post merger Profitability and MPS of NatSteel. The correlation coefficient (r) comes out as 0.24 which is a low degree of positive correlation while the coefficient of determination (r^2) is 0.055 which means that the relation explains around 5.5 percent variation in values. The regression equation X on Y shows that for every unit change in Y that is the post merger MPS of NatSteel there is 8.84 units change in X that is the post merger profitability of NatSteel. The intercept is high at 18.03 highlighting the role of other factors. The equation Y on X shows that for every unit change in X that is the post **merger profitability of NatSteel there is a 0.062 unit's change in Y that is the Post** merger MPS of NatSteel. The value of intercept is also not very high at 1.067. The t value is calculated for statistical significance and it comes out to be 6.24 for five years of post merger. The table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value being higher than the table value leads to **rejection of Null Hypothesis and acceptance of Alternative Hypothesis**. Hence the relation is statistically significant and there is a relationship between the Post merger values of Profitability and MPS.

Table 9.2.6: Pre and Post Merger Analysis of MPS and Profitability of NatSteel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
4. X=Pre-Merger Profitability of NatSteel Y=Pre Merger MPS of NatSteel	=0.78	0.604	X on Y is X=94.55Y-45.62 Y on X is Y=0.0064X+0.55	1.18*
5. X=Post-Merger Profitability of NatSteel Y=Post Merger MPS of NatSteel	=0.24	0.055	X on Y is X=8.84Y+18.03 Y on X is Y=0.062X+1.067	6.24*

*Five Years of Pre and Post Merger taken
Source: Compiled and Calculated from Table 9.2.3, Table 9.2.4 and Appendix 20

Table 9.2.7 explores the relation between the Pre and Post MPS and EPS.

6. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post -merger MPS of NatSteel.**
   H_α (Alternative Hypothesis) = There is a relation between the Pre and Post -merger MPS of NatSteel

The Hypothesis determines the relationship between the Pre and Post MPS of NatSteel. The correlation coefficient (r) comes out to be -0.57 which is a moderate degree of negative correlation. The coefficient of determination (r^2) is worked out as 0.324 which means that just 32.4 percent of the variance is explained by this relationship. The regression equation Y on X shows that for every unit change in X that is the Pre merger MPS of NatSteel there is a -0.64 unit's change in Y that is the Post merger MPS of NatSteel. The value of intercept is also low at 1.66. The t value is calculated ad 3.78 for five years of pre and post merger while the table value of t when v=8 at $t_{0.05}$ is 2.31. Hence the relation is statistically significant as the calculated value is more than the table value. **It leads to acceptance of Alternative Hypothesis and rejection of Null Hypothesis.** Hence there is a relation between the Pre and Post merger MPS.

7. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger EPS and Post -merger EPS of NatSteel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger EPS and Post -merger EPS

The hypothesis between the pre and post merger EPS is examined here. It gives the correlation coefficient (r) at -0.548 which is a moderate degree of negative correlation. The coefficient of determination (r^2) is 0.30 which means that around 30 percent of the variances are explained by this relationship. The regression equation Y in X shows that for every unit change in X that is the Pre merger EPS of NatSteel there is a -0.04 unit's change in Y that is the post merger EPS of NatSteel. The value of intercept is high at 26.77 indicating the role of other factors. The t value is calculated as 0.81 for five years of pre and post merger. The table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value being lesser than the table value leads to **rejection of Alternative Hypothesis and acceptance of Null Hypothesis.** Hence the relation is statistically insignificant and there is no relation between the Pre and Post merger values of EPS of NatSteel.

Table 9.2.7: Pre and Post Merger Analysis of MPS and EPS of NatSteel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
8. X=Pre-Merger MPS of NatSteel Y=Post Merger MPS of NatSteel	-0.57	0.324	Y on X is Y=-0.64X+1.66	3.78*
9. X=Pre-Merger EPS of NatSteel Y=Post Merger EPS of NatSteel	-0.548	0.300	Y on X is Y=-0.04+26.77	0.81*

*Five years of Pre and Post merger taken
Source: Compiled and Calculated from Appendix 20

The financials of NatSteel show that the company was running into profits prior to the merger but after the merger took place in 2005 there was a significant increase in the rate of profits indicating that the sale of its steel division was proving to be profitable for the enterprise. The testing of various Hypotheses shows that the relation between the Pre and Post merger FATR and WCTR is significant while the one between the pre and post merger profitability is insignificant. In case of FATR the correlation coefficient (r) is moderate at 0.38 while for WCTR it is high at 0.76. The testing of Hypothesis to determine the relation between the profitability and MPS before and after the merger is interesting. The relation between the Profitability and MPS prior to the merger is statistically insignificant while the relation between the Profitability and MPS after the merger is statistically significant. The degree of correlation is low at 0.24. The Profitability is moved by 8.84 units for a unit change in MPS while the MPS is affected by 0.062 units for a units change in EPS. In case of EPS the relation between the Pre and post merger figures is insignificant while in case of MPS the pre and post merger data are statistically significant. However there is a negative correlation between the two at -0.55.

b) Tata steel

Tata Steel was earlier known as TISCO (Tata Iron and Steel Company Limited). It is the largest company in terms of domestic production. It is based in Jamshedpur in Jharkhand and is India's second largest and second most profitable company in private sector in India in 2008[1]

The Pre merger financial analysis has been done below in Tables 9.2.8, 9.2.9 and 9.2.10.

Pre-Merger Analysis

For the financial year 2000 the sales were at Rs 6886.28 crores and cost of sales at Rs 4683.38 crores. DER was at 1.08 indicating equivalent proportion of owned and borrowed funds. CR was at 1.16. FATR was on the lower side at 0.84 while the ICR was comfortable at 2.21. Profitability was satisfactory at 6.14 percent. The year 2001 saw fairly stable ratios for Tata Steel with CR at 1.55, DER at 0.96. The ICR at 3.30 reflected that the company had sufficient finances to meet its debt expenses while NP was a handsome 7.13 percent. The FATR was however low at 0.52 indicating scope of utilization of fixed assets for improved operational efficiency. Sales rose by 12.68 percent against an increase of 32.41 percent increase in cost of sales.

The year 2002 saw sales decline by a disturbing 19.58 percent while cost of sales for manufacturing and other expenses for the same period increased by 2.89 percent. The CR was fairly the same at 1.63 along with an improved FATR at 0.89. The ICR also fell steeply to 1.75. DER further enhanced to 1.42 while NP sharply fell to 2.69 percent. The year 2003 witnessed a dramatic comeback with sales increasing by 28.73 percent and a marginal 1.56 percent increase in the expenses. The DER fell marginally to 1.33 while the CR also reduced to 1.36. The operational efficiencies improved with FATR notching up to 1.12. ICR was more than comfortable at 5.26. The vibrant activity was reflected in the NP at 10.34 percent. Being one of Asia's largest integrated steel plant there were new goals and objectives to be set out and achieved for the future. The year 2004 saw highest ever production of 4.06 million tones, sales increase by 21.73 percent while the expenses also increased by 14 percent for the period. However the liquidity was in troubled waters with CR at 1.02 and ICR at a huge 23.39 indicating too much cushion for debt which was a matter to be considered by the management. The major reason behind the fall in liquidity was the repayment of debt worth Rs 1036 crores. The FATR was at 1.19 and NP at 14.65 percent.

However with the economic scenario in India looking upbeat with increasing emphasis in infrastructure, the future looked bright and offered great prospects for the steel business. Being one of the lowest cost producers of steel in the world it was looking to capitalize on the economic scenario where a revival in the economic steel industry was being witnessed in the past few years. With GDP at 8.01 percent it was a sign of things to come. Towards the achievement of building a global business and expanding operations, the company decided to invest in the steel business of NatSteel Ltd.

The Post merger analysis of Tata Steel is done in Tables 9.2.8, 9.2.9, 9.2.10 and 9.2.11

Post-Merger Analysis

The profitability of Tata Steel after the acquisition of NatSteel is discussed here. The year 2005 saw sales jump by a phenomenal 33.19 percent while the manufacturing and other expenses increased by 17.66 percent. The CR improved marginally to 1.07

while FATR and NP were at 1.38 and 21.88 percent respectively. The notable and worrisome feature was the ICR at 29.15 which was a little too much on the higher side mainly because of the DER at 0.39 indicating there was too much reliance on equity and debt options were not used optimally. Buoyed by the growth in the global steel industry, where steel consumption rose by 9.6 percent mainly relying on the growth in China, various initiatives and measures were taken at Tata Steel in order to capitalize on the situation at hand.

In the year 2006 the rate of growth of sales moderated to 7.98 percent while the rate of growth of expenses to 7.65 percent. The financial ratios also confirmed the stability of the concern with CR at 1.15, FATR at 1.23 and NP at 20.45 percent. The ICR climbed further to 45.27 with the DER falling to 0.26. The robust economic environment had a positive influence but the profit margins were restricted by the depressed prices. The Indian growth story was also positive with GDP lurching around 8 percent. The acquisition of NatSteel also gave it an access to six countries in south-east Asia and China. The rate of growth of sales increased to 15.27 percent in 2007 as compared to a 16.02 percent increase in cost of sales. Liquidity improved significantly with CR at 1.66. The ICR dropped to 37.13 and DER rose to 0.68. NP was stable at 21.36 percent and FATR was at 1.15. The demand for steel continued to be strong. Integration was also the order of the day with world's top two companies Arcelor and Mittal striking a merger and laying down a platform for future consolidations. For Tata Steel the year 2007 was indeed remarkable as it structured the largest ever acquisition by an Indian Company by acquiring Corus and emerging as the fifth largest steel company in the world. The market however was apprehensive of the largest ever acquisition structured by an Indian company.

Despite the Corus acquisition that was undertaken, sales increased by 12.29 percent and manufacturing and other expenses by 7.69 percent in 2008. The liquidity dipped with CR at 1.22 and ICR at 9.10. DER and FATR were stable at 0.66 and 1.33 respectively while NP was at 21.12 percent. The global meltdown was felt in the form of rising costs and reduced margins for the global steel industry but the figures suggested that the Tata-Corus acquisition was on the right track. For the year 2009 the sales rose by 9.57 percent against a 33.33 percent increase in costs. The debt component increased with the DER at 0.89. The CR fell marginally to 1.15 while there was a sharp slump in FATR at 0.43 indicating fall in efficiencies. ICR also fell to 7.64 while profits were fairly stable at 21.39 percent.

Table 9.2.8: Pre and Post Merger Sales of Tata Steel (2001-2009)

(Figures in Rupees Crore)

Pre-merger			Post-merger		
Year	**Sales**	**Percentage Change (%)**	**Year**	**Sales**	**Percentage Change (%)**
2000	6886.28	-	2005	15876.87	33.19
2001	7759.44	12.68	2006	17144.22	7.98
2002	7607.48	-19.58	2007	19762.57	15.27
2003	9793.27	28.73	2008	22191.80	12.29
2004	11920.96	21.73	2009	24,315.77	9.57

Source: Compiled and Calculated from Tata Steel's Annual Reports 2000 to 2009. Retrieved from http://www.tatasteel.com/investors/performance/annual-report.asp and http://www.moneycontrol.com/financials/tatasteel/balance-sheet/TIS

Table 9.2.9: Pre and Post Merger Expenses of Tata Steel (2001-2009)

(Figures in Rupees Crore)

Pre-merger			Post-merger		
Year	**Manufacturing & other expenses**	**% change**	**Year**	**Manufacturing & other expenses**	**% change**
2000	4683.38		2005	8658.41	17.66
2001	6201.1	32.41	2006	9320.50	7.65
2002	6380.35	2.89	2007	10813.84	16.02
2003	6480.13	1.56	2008	11645.24	7.69
2004	7358.82	13.56	2009	15,525.99	33.33

Source: Compiled and Calculated from Tata Steel's Annual Reports 2000 to 2009. Retrieved from http://www.tatasteel.com/investors/performance/annual-report.asp and http://www.moneycontrol.com/financials/tatasteel/balance-sheet/TIS

Table 9.2.10: Pre-merger Ratio Analysis Tata Steel (2001-2004)

Year	**Debt Equity Ratio (DER)**	**Current Ratio (C.R)**	**Fixed Assets Turnover Ratio (FATR)**	**Interest Coverage Ratio (ICR)**	**Net Profit Ratio (N.P) (%)**
2000	1.08	1.16	0.84	2.21	6.14
2001	0.96	1.55	0.52	3.30	7.13
2002	1.42	1.63	0.89	1.75	2.69
2003	1.33	1.36	1.12	5.26	10.34
2004	0.75	1.02	1.19	23.39	14.65

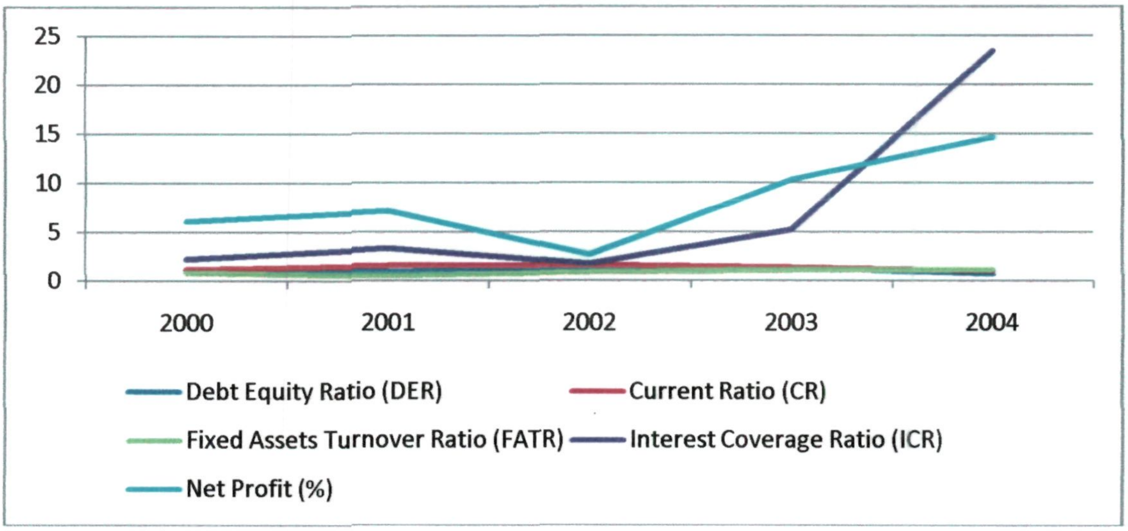
Source: Compiled and Calculated from Table 9.2.8, Appendix 21 and Appendix 22

Table 9.2.11: Post-merger Ratio Analysis Tata Steel (2005-2009)

Year	Debt Equity Ratio (DR)	Current Ratio (C.R)	Fixed Assets Turnover Ratio (FATR)	Interest Coverage Ratio (ICR)	Net Profit Ratio (N.P) (%)
2005	0.39	1.07	1.38	29.15	21.88
2006	0.26	1.15	1.23	45.27	20.45
2007	0.68	1.66	1.15	37.13	21.36
2008	0.66	1.22	1.33	9.10	21.12
2009	0.89	1.15	0.43	7.64	21.39

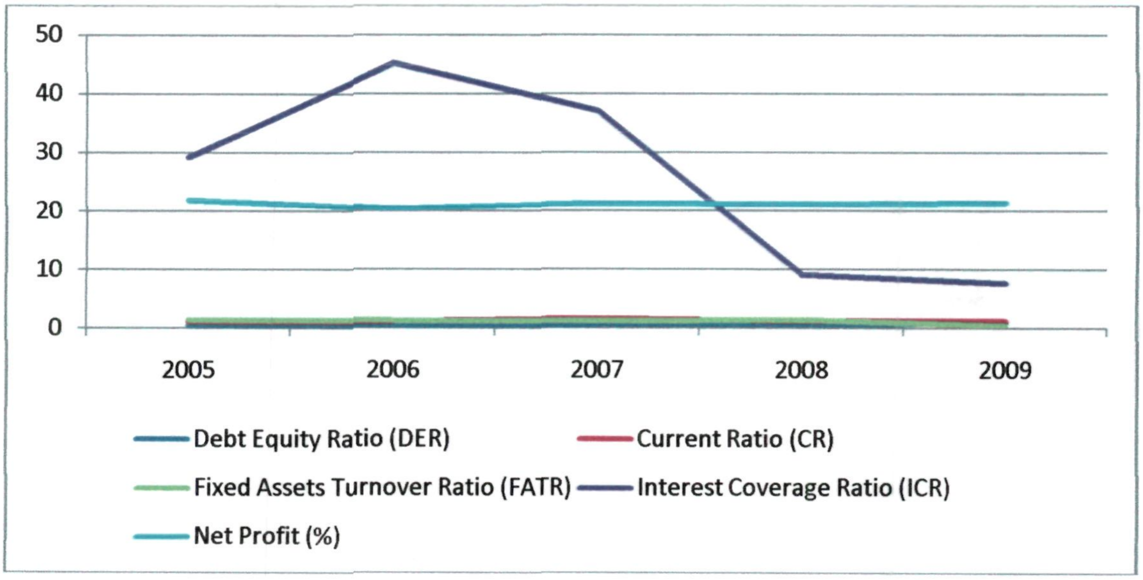
Source: Compiled and Calculated from Table 9.2.8, Appendix 21 and Appendix 22

Figure 9.2.3: Pre Merger Ratio Analysis of Tata Steel (Acquisition of NatSteel)



Source: Table 9.2.10

Figure 9.2.4: Post Merger Ratio Analysis of Tata Steel (Acquisition of NatSteel)



Source: Table 9.2.11

Table 9.2.12 gives an insight into the relationship between the Pre and Post merger Profitability FATR and ICR of Tata Steel.

1. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post -merger Profitability of Tata Steel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre and Post -merger Profitability of Tata Steel.

The relation between the pre and post merger profitability of Tata Steel gives the correlation coefficient (r) at -0.45 which is a moderate degree of negative correlation. The coefficient of determination (r^2) is at 0.2016 showing that only 20.16 percent of variance is explained. The regression equation Y on X shows that for every unit change in X that is the Pre merger profitability of Tata Steel there is a -0.0052 unit's change in Y that is the post merger profitability of Tata Steel. The intercept is high at 21.28 indicating that there are other factors effecting the movement of Profitability. The value of t is calculated as 6.41 for five years of pre and post merger. The table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value is more than the table value leading to the inference that the data is statistically significant and there is a relation between the Pre and Post merger profitability. The Null Hypothesis is rejected while the Alternative Hypothesis is accepted.

2. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post - merger FATR of Tata Steel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre and Post -merger FATR of Tata Steel.

The analysis of the Pre and Post merger FATR of Tata Steel gives the correlation coefficient (r) at 0.514 while the coefficient of determination (r^2) is at 0.2644 showing that only 26.44 percent variance is explained. The regression equation Y on X shows that for every unit change in X that is the pre merger FATR of Tata Steel there is a - 4.90 unit's change in Y that is the Post merger FATR of Tata Steel. The intercept is at 5.57 indicating that when the slope is zero there is 5.57 units change in Y. The t test is taken for statistical significance and it gives the value of t at 0.915. The table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value is lesser than the table value which leads to the conclusion that the relation is s statistically insignificant and there is no relation between the pre and Post merger FATR. The Null Hypothesis is accepted while the Alternative Hypothesis is accepted.

3. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post -merger FATR of Tata Steel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre and Post -merger FATR of Tata Steel.

The study of pre and Post merger ICR reveal that for every unit change in X that is the pre merger ICR of Tata steel there is a change of -1.24 units change in the Post merger ICR of Tata Steel. The intercept is high at 34.56 indicating the effect of other factors in determining the ICR. The value of t test is calculated as 2.16 for five years of pre and post merger while the table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value being less than the table value leads to rejection of Null Hypothesis and acceptance of Alternative Hypothesis. Hence the relation is statistically insignificant and there is no relation between the Pre and Post merger values.

Table 9.2.12: Pre and Post Merger Analysis of Profitability, FATR and ICR of Tata Steel

Variables	***Correlation Coefficient (r)**	***Coefficient of Determination (r^2)**	***Regression Equations**	***T-test**
1. X= Pre-Merger Profitability of Tata Steel Y=Post-Merger Profitability of Tata Steel	=-0.45	0.2016	Y on X is Y=-0.0052X+21.28	6.41
2. X= Pre-Merger FATR of Tata Steel Y=Post-Merger FATR of Tata Steel	=-0.514	0.2644	Y on X is Y=-4.90X+5.57	0.915
3. X= Pre-Merger ICR of Tata Steel Y=Post-Merger ICR of Tata Steel	=-0.6763	0.4574	Y on X is Y=-1.24X+34.56	2.16

*Five Years of Pre and Post Merger Undertaken
Source: Compiled and Calculated from Table 9.2.10 and 9.2.11

Table 9.2.13 gives a synoptic view of the relation between the Profitability and the Market Price before and after the merger.

4. **H_0 (Null Hypothesis) = There is no relation between the Pre merger Profitability and Pre -merger MPS of Tata Steel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre merger Profitability and Pre -merger MPS of Tata Steel.

The correlation coefficient (r) is worked out as 0.86 which is a high degree of positive correlation. The coefficient of determination (r^2) is 0.7396 indicating that a high level of variance that is 73.96 percent is explainable. The regression equation X on Y shows that for every unit change in Y that is the pre merger MPS of Tata Steel there is a 0.06 unit's change in X that is the Pre merger Profitability of Tata Steel. The intercept is at 2.65 indicating that when the intercept is zero the value of X would be affected by 2.65 units. The equation Y on X shows that for every unit change in X that is the pre merger profitability of Tata Steel there is 13.38 units change in Y that is the Pre merger MPS of Tata Steel. The value of intercept is high at 9.05 indicating the role of other factors. The value of t is computed as 2.92 for five years of pre merger. The table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value is more than the table value which leads to the conclusion that the relation is statistically significant and there is a relationship between the pre merger profitability and MPS of Tata Steel. The Null hypothesis is rejected while the Alternative Hypothesis is accepted.

5. **H_0 (Null Hypothesis) = There is no relation between the Post merger Profitability and Post -merger MPS of Tata Steel**
   H_a (Alternative Hypothesis) = There is a relation between the Post merger Profitability and Post merger MPS of Tata Steel

Table 9.2.13 further deals with the relationship between the post merger profitability and MPS of Tata Steel. The correlation coefficient (r) is -0.41 which is a moderate degree of negative correlation. The coefficient of determination (r^2) is 0.1681 indicating that 16.81 percent of the variance is explained. The regression equation X on Y shows that for every unit change in Y that is the post merger MPS of Tata Steel there is -0.001 units change in X which is the post merger Profitability of Tata Steel. The intercept is high at 21.75 indicating that it is affected by other factors other than MPS more. The regression equation Y on X shows that for every unit change in X that is the post merger profitability of Tata Steel the value of Y that is the post merger

MPS is moved by -140.41 units while the value of intercept is extremely high at 3407.39 indicating the volatility of MPS which is affected by other factors significantly. The value of t is worked out as 5.04 for five years of pre and post merger while the table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value is more than the table which leads to acceptance of Alternative Hypothesis and rejection of Null Hypothesis. Hence the relation is statistically significant and there is a relation between Post merger values of MPS and Profitability.

Table 9.2.13: Pre and Post Merger Analysis of MPS and Profitability of Tata Steel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
4. X=Pre-Merger Profitability of Tata Steel Y=Pre Merger MPS of Tata Steel	=0.86	0.7396	X on Y is X=0.06Y+2.65 Y on X is Y=13.38X-9.05	2.92*
5. X=Post-Merger Profitability of Tata Steel Y=Post Merger MPS of Tata Steel	=-0.41	0.1681	X on Y is X=-0.001Y+21.75 Y on X is Y=-140.41X+3407.39	5.04*

*Five Years of Pre and Post Merger taken
Source: Compiled and Calculated from Table 9.2.10, Table 9.2.11 and Appendix 22

Table 9.2.14 gives an insight into the relationship between the Pre and Post MPS and EPS of Tata Steel.

6. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post -merger EPS of Tata Steel**
   H_a (Alternative Hypothesis) = There is a relation between the Pre and Post -merger EPS of Tata Steel

The correlation coefficient (r) between the Pre and Post merger EPS comes out to be -0.619 which is a moderate degree of negative correlation. The coefficient of determination (r^2) is calculated as 0.3832 indicating that only 38.32 percent of variance is explained by this relation. The regression equation Y on X shows that for every unit change in X which is the Pre merger MPS there is 1.57 units change in Y that is the Post merger MPS. The value of intercept is very high at 582.71 indicating that other factors have a dominating role to play in the movement of MPS. The value of t is calculated as 3.77 for five years of pre and post merger while the table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value being more than the table value leads to acceptance of Alternative Hypothesis and rejection of Null Hypothesis. Hence the relation is statistically significant and there is a relation between the Pre and Post merger MPS.

7. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post -merger EPS of Tata Steel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre and Post -merger EPS of Tata Steel.

The analysis of relation between the Pre and Post merger EPS gives the correlation coefficient (r) at 0.86 which is a high degree of positive correlation while the coefficient of determination (r^2) is 0.7382 which means that a high percentage that is 73.82 percent of variance is explained. The regression equation Y on X shows that for every unit change in X that is the pre merger EPS there is a 0.143 units change in Y that is the post merger EPS. The value of constant is at 62.57 which indicate a significant role of other factors. The t value comes out to be 5.88 for five years of Pre and post merger while the table value comes out to be 2.31. Hence the calculated value being more than the table value leads to **rejection of the Null Hypothesis and acceptance of the Alternative Hypothesis**. Hence the relation is statistically significant and there is a relation between the Pre and Post merger values of EPS.

Table 9.2.14: Pre and Post Merger Analysis of MPS and EPS of Tata Steel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
8. X=Pre-Merger MPS of Tata Steel Y=Post Merger MPS of Tata Steel	=-0.619	0.3832	Y on X is Y=-1.57X+582.71	3.77*
7. X=Pre-Merger EPS of Tata Steel Y=Post Merger EPS of Tata Steel	=0.86	0.7382	Y on X is Y=0.143X+62.57	5.88*

*Five years of Pre and Post merger taken
Source: Compiled and Calculated from Appendix 22

Table 9.2.15 calculates the Pre merger and Post merger Profit Margin and Profit Rate for NatSteel and Tata Steel. The pre merger Profit Margin for NatSteel is 0.153 while for Tata Steel it is at 0.82. The post merger Profit Margin for NatSteel moved up to 0.324 indicating improved financial performance. The Post merger Profit Margin for Tata Steel is at 0.212. The percentage increase of Profit Margin for NatSteel is 111.77 percent while for Tata Steel it is 158.54. Hence financially both the undertakings display improved performance. The Pre merger Profit rate for NatSteel is 0.0924 while for Tata Steel it is 0.06. The Post merger profit Rate for NatSteel is 0.147 while for Tata Steel it is 0.355. Thus the Profit Rate for NatSteel increased by 59.09 percent and for Tata Steel by a huge 491.67 percent. Hence the operational performance of both the undertakings after the merger was highly impressive.

8. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profit Margin**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profit Margin
9. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profit Rate**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profit Rate

Table 9.2.15: Pre and Post Merger Profit Rate and Profit Margin for NatSteel and Tata Steel

	Net Sales **Profit Margin= $\frac{PAT}{NS}$**			**Total Assets** **Profit Rate= $\frac{PAT}{TA}$**		
	Pre-merger Average	**Post-merger Average**	**Percentage Increase**	**Pre-merger Average**	**Post-merger Average**	**Percentage Increase**
NatSteel	0.153	0.324	111.77	0.0924	0.147	59.09
Tata Steel	0.082	0.212	158.54	0.060	0.355	491.67

Source: Compiled and Calculated from Table 9.2.1, 9.2.8, Appendix 20, Appendix 21 and Appendix 22

Tata Steel earned profits on a steady basis over the last decade. The merger had an impact on the profitability of the entity with a moderate degree of correlation at 0.45. The FATR and ICR were however unaffected and were statistically insignificant. The relation between the MPS and Profitability shows that both the variables had a statistically significant relation both before and after the merger. However the degree of correlation fell from a high degree at 0.86 to a moderate degree of negative correlation at 0.41. The post merger MPS was affected by -140.41 units for a unit change in Profitability. The intercept was very high at 3407.39. Also the Pre merger MPS and EPS had a relation with the Post merger MPS and EPS respectively. The degree of correlation between the Pre and Post merger MPS is again negative at -0.62. The Profit Margin for both NatSteel and Tata Steel increased significantly. The Profit Margin for Tata Steel increased significantly by 491.67 percent indicating a marked improvement in the operating efficiency as compared to a 158.54 percent increase in profits

9.3 *Corus and Tata Steel: Pre and Post Merger Performance Assessment*

a) Corus

Corus was formed on 6 October 1999 through the merger of British Steel and Koninklijke and grew to be the second largest producer of Steel in Europe with its operations mainly in UK, Netherlands, Germany, France and Belgium having approximately 37000 employees worldwide[2].It was acquired by Tata Steel at 608 pence per share on January 30 2007.[3]

Pre Merger Analysis

Tables 9.3.1 and 9.3.2 give a deep insight into the pre merger analysis of Corus.
The year 2000 saw the turnover of Corus Group at £9509 million and the operating cost at £10542 million. The DER was very low at 0.53. The CR was satisfactory at 2.32, FATR was at 2.30 and WCTR at 3.93. The ICR at -10.29 was extremely low. However the losses which stood at -9.89 percent were a cause for worry. It should be taken into consideration that this year saw restructuring expenses worth £1152 million and writing down of assets to the tune of £701 million. Otherwise the stainless steel

division made operating profits to the tune of £150 million. There were encouraging trends relating to demand in this sector.

However with major changes in management there was a sense of insecurity among the employees as well and the group was faced with major challenges to redeem its position and prove its competitiveness. The year 2001 saw the turnover fall by 19.35 percent and operating cost by23.32 percent. The DER was stable at 0.53 while the other ratios were fairly satisfactory with CR at 1.95, FATR at 2.05 and WCTR at 4.68. The ICR improved to -3.44 but was still negative. The losses dropped marginally to -5.46 percent. The operations at Corus were marred by looses and their cause was not helped by the global market which was weak in terms of demand resulting in excess supply and lower selling prices.

The year 2002 saw turnover fall by a comparatively lesser margin at -6.27 and operating cost by 5.57 percent. The ratios did not change much with DER at 0.54 signaling scope for further influx of debt, CR at 2.02 reflecting sound liquidity, FATR at 2.3 reflecting efficient utilization of fixed assets and WCTR at 4.31 reflecting adequate use of working capital. The ICR continued to be negative at -3.37.The losses however notched up a little to -6.37 percent. Though the management's efforts yielded results in terms of operational efficiency but the weakened global demand was a cause for worry. The year 2003 indeed posed various challenges to the Corus group. The efforts reflected in the results to some extent with the turnover increasing by 10.64 percent against an increase of 6.9 percent in operating cost. Debt proportion lowered further with the DER falling to 0.47. CR rose to 2.15 and FATR to 2.68. The WCTR also rose to 4.39 while the ICR dropped down to -1.57. Losses' dropping to -3.84 was a positive sign. With failing of various plans and projects new initiatives were undertaken in the form of management team, strategies, plans and policies. Plans were made to make concerted efforts in areas of strength such as carbon steel.

For the year 2004 the turnover further increased by 14.77 percent against an increase of 7.22 percent in operating cost. The ratios were fairly the same with DER at 0.44, CR at 2.24, FATR at 3.05 and WCTR at 4.01. The ICR became positive which was a sign of relief at 5.76. However the highlight of the financial results was the profitability which was recorded at 4.78 percent. 'Restoring Success' plan, undertaken in the previous financial year resulted in increased efficiency and performance. It was well reflected in the results. The favorable global and economic environment was an added boost to the company in restoring its competitiveness in Europe. However it was important to the pattern of growth.

For the financial year 2005 the turnover fell marginally by 1.90 percent against a fall of 2.72 percent in operating cost. DER was steady at 0.43. CR fell marginally to 1.81 and FATR to 2.62 while the WCTR increased to 4.63. The reduced DER led to an increase in ICR to 6.56. It is notable that despite a capital investment of £423 million the position of Corus had strengthened in terms of liquidity reflecting upon the healthy state of financial affairs in a highly competitive and challenging global market where demand had slowed down. The "Restoring Success' plan was well on target with the estimations that 80 percent of the targets underlined were achieved by the year 2005. The year 2006 saw the turnover increase by another 6.31 percent against a 0.09 percent increase in the operating cost. The ratios were more or less the same with DER at 0.35, CR at 1.88, FATR at 2.65 and WCTR at 4.72. The ICR was at 2.26. The profitability however reduced to1.99 percent. In a bid to expand operations beyond Western Europe, Corus explored its options by considering various plans in Brazil, Russia and China. Ultimately the offer of Tata Steel, the world's fifth largest to acquire Corus at 608 pence per share was approved unanimously by the Board and the takeover was finally completed on 2 April, 2007.

The above analysis shows that in the recent years Corus had recovered from the losses it was experiencing few years back. Ratio analysis also reveals that the company was financially sound.

Table 9.3.1: Pre Merger Turnover and Operating Cost of Corus Group (2001-2005) **(Figures in Pound (£) Million)**

Pre Merger			Pre Merger		
Year	**Turnover**	**Percentage Increase over Previous Year**	**Year**	**Operating Cost**	**Percentage Increase over Previous Year**
2000	9509		2000	10542	
2001	7669	-19.3501	2001	8084	-23.3163
2002	7188	-6.272	2002	7634	-5.56655
2003	7953	10.64274	2003	8161	6.903327
2004	9332	14.77711	2004	8750	7.217253
2005	9155	-1.8967	2005	8512	-2.72
2006	9733	6.31349	2006	9276	0.089756

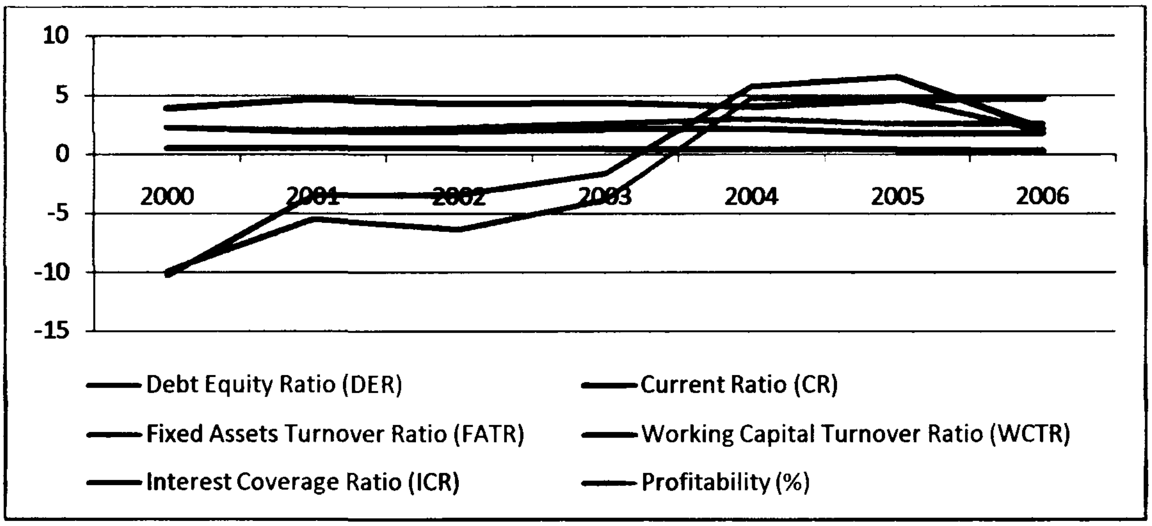
Source: Compiled and Calculated from Annual Reports of Corus from 2000 to 2006. Retrieved from http://www.corusgroup.com/en/company/financial_information/report_and_accounts/

Table 9.3.2: Pre Merger Ratio Analysis of Corus Group (2001-2005)

Year	Debt Equity Ratio (DER)	Current Ratio (CR)	Fixed Assets Turnover Ratio (FATR)	Working Capital Turnover Ratio (WCTR)	Interest Coverage Ratio (ICR)	Profitability (%)
2000	0.53	2.32	2.30	3.93	-10.29	-9.89
2001	0.53	1.95	2.05	4.68	-3.44	-5.46
2002	0.54	2.02	2.30	4.31	-3.37	-6.37
2003	0.47	2.15	2.68	4.39	-1.57	-3.84
2004	0.44	2.24	3.05	4.01	5.76	4.78
2005	0.43	1.81	2.62	4.63	6.56	4.72
2006	0.35	1.88	2.65	4.72	2.26	1.99

Source: Compiled and Calculated from Annual Reports of Corus from 2000 to 2006 Retrieved from http://www.corusgroup.com/en/company/financial_information/report_and_accounts/

Figure 9.3.1: Pre Merger Ratio Analysis of Corus



Source: Table 9.3.2

Table 9.3.3 gives a deep understanding of the relationship between the Pre Merger Profitability, FATR and ICR of Corus Group with the Post merger data of Tata Steel to study whether the financials of the Tata Steel were affected by that of the Corus Group.

1. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger Profitability of Corus and Post -merger Profitability of Tata Steel.**
   H_α (Alternative Hypothesis) = There is a relation between the Pre Merger Profitability of Corus and Post -merger Profitability of Tata Steel

The correlation coefficient (r) between the X and Y that is the pre merger profitability of Corus and the post merger Profitability of Tata Steel is worked out as -0.57 indicating a moderate degree of negative correlation. The coefficient of determination (r^2) is 0.3249 indicating that just 32.49 percent of the variance is explained by this relationship. The regression equation Y on X shows that for every unit change in X that is the Pre merger Profitability of Corus there is a -0.053 unit's change in Y that is the Post merger profitability of Tata Steel. The intercept is high at 21.49 pointing towards the role of other factors in influencing the profitability. The value of t for three years of Pre and Post merger is 18.89 while the table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value being higher than the table value leads to **acceptance of the Alternative Hypothesis and rejection of the Null Hypothesis.** Hence the data is statistically significant and there is a relation between the Pre and Post merger values. Further when the t value is calculated for seven years of Pre merger and three years of post merger it is worked out to be 6.69 while the table value of t when v=8 at $t_{0.05}$ is 2.31. Here again the calculated value is more than the table value. It means that the relation is statistically significant and there is a relation between the Pre and post merger values. The **Null Hypothesis is rejected while the Alternative Hypothesis is rejected.**

2. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger FATR of Corus and Post -merger FATR of Tata Steel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger FATR of Corus and Post -merger FATR of Tata Steel

Further Table 9.3.3 explores the relationship between the Pre Merger FATR of Corus and the Post merger FATR of Tata Steel. The correlation coefficient (r) is 0.27 which is a moderate degree of positive correlation. The coefficient of determination (r^2) is 0.0729 which means that just 7.29 percent of the variation is explained by this relationship. The regression equation Y on X shows that for every unit change in X that is the Pre merger FATR of Corus there is a 0.53 unit's change in Y that is the post merger FATR of Tata Steel. The intercept is also low at -0.50. The values are tested for statistical significance for which t-test is conducted. The t value is worked out to be 5.85 for three years of Pre and Post merger. The table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value is higher than the table value which leads to **acceptance of the Alternative Hypothesis and rejection of the Null Hypothesis.** Hence the relation is statistically significant and there is a relation between the Pre and post merger values.

Further the t values are calculated for seven years of Pre merger and three years of post merger. It comes out as 6.04 while the table value of t when v=8 at $t_{0.05}$ is 2.31. Hence the calculated value being more than the table leads to the conclusion that the relation is statistically significant and there is a relation between the Pre and Post merger values. **The Null Hypothesis is rejected while the Alternative Hypothesis is accepted.**

3. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger ICR of Corus and Post -merger ICR of Tata Steel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger ICR of Corus and Post -merger ICR of Tata Steel

Table 9.3.3 further sheds light on the relation between the Pre and post merger values of ICR. The correlation coefficient (r) is worked out as 0.38 indicating a moderate degree of positive correlation. The coefficient of determination (r^2) is 0.1444 which means that 14.44 percent change in variance is explained. The regression equation Y on X shows that for every unit change in X that is the pre merger ICR of Corus there is a 2.78 unit's change in Y that is the post merger ICR of Tata Steel. The value of t for three years of Pre and Post merger is calculated as 1.35 while the table value of t when v=4 at $t_{0.05}$ is 2.78. Hence the calculated value is less than the table value which leads to the conclusion that the relation is statistically insignificant and there is no relation between the Pre and Post merger ICR. The **Null Hypothesis is accepted and the Alternative Hypothesis is rejected.**

The t value is further calculated for seven years of pre-merger and three years of post merger. It is worked out to be 2.75. The table value of t when v=8 at $t_{0.05}$ is 2.31. Hence the calculated value is more than table value which leads **to rejection of Null Hypothesis and acceptance of the Alternative Hypothesis** stating that there is a relation between the Pre and Post merger ICR. The relation is slated to be statistically significant.

Table 9.3.3: Pre and Post Merger Analysis of Profitability, FATR and WCTR of Corus and Tata Steel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	**T-test
1. X= Pre-Merger Profitability of Corus Y=Post-Merger Profitability of Tata Steel	=-0.57	0.3249	Y on X is Y=-0.053X+21.49	t=18.89* t=6.69**
2. X= Pre-Merger FATR of Corus Y=Post-Merger FATR of Tata Steel	=0.27	0.0729	Y on X is Y=0.53X--0.50	t=5.85* t=6.04**
3. X= Pre-Merger ICR of Corus Y=Post-Merger ICR of Tata Steel	=0.38	0.1444	Y on X is Y=2.78X+4.48	t=1.35* t=2.75**

*Three Years of Pre and Post Merger Undertaken
**Seven Years of Pre and Three Years of Post Merger undertaken
Source: Compiled and Calculated from Table 9.3.2 and Table 9.3.8

Table 9.3.4 deals with the relationship between the pre merger EPS of Corus and the post merger EPS of Tata Steel.

4. **H_0 (Null Hypothesis) = There is no relation between the Pre Merger EPS of Corus and Post -merger EPS of Tata Steel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre Merger EPS of Corus and Post -merger EPS of Tata Steel

The correlation coefficient (r) is worked out to be 0.90 which is a very high degree of positive correlation. The coefficient of determination (r^2) is worked out as 0.81 which means that 81 percent of the variance is explained. The regression equation Y on X shows that for every unit change in X that is the pre merger EPS of Corus there is 0.30 units change in Y that is the Post merger EPS of Tata Steel. The value of t is worked out to be 13.88 for three years of Pre and Post merger. The table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value being more than the table value leads to **acceptance of Alternative Hypothesis and rejection of Null Hypothesis.** The relation is statistically significant and there is a relation between the Pre and Post merger values.

The t value is further calculated as 6.60 for seven years of pre merger and three years of post merger while the table value of t when v=8 at $t_{0.05}$ is 2.31. Here again the calculated value is more than the table value which leads to **acceptance of Alternative Hypothesis and rejection of Null Hypothesis.** Hence there is a relation between the Pre and Post merger values which is statistically significant.

Table 9.3.4: Pre and Post Merger Analysis of EPS of Corus and Tata Steel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	**T-test
4. X= Pre-Merger EPS of Corus Y=Post-Merger EPS of Tata Steel	=0.90	0.81	Y on X is **Y=0.30X+63.24**	t=13.88* t=6.60**

*Three Years of Pre and Post Merger Undertaken
**Seven Years of Pre and Three Years of Post Merger undertaken
Source: Compiled and Calculated from Appendix 22 and Appendix 24

From 2000 to 2003 Corus was registering losses and it was only in 2004 that Corus earned profits. However the rate of profits from 2004 to 2006 was in the range of 2 percent to 5 percent which was not very high. The test of hypothesis shows that the Profitability and FATR prior to the merger had a relation with that of the post merger Profitability and FATR respectively of Tata Steel. While Profitability had a negative correlation at -0.57, the FATR had a positive correlation with the post merger figure at 0.27. The ICR was affected only in the longer run. Pre merger EPS had a very high degree of positive correlation with the post merger EPS at 0.90 indicating the benefits accrued to the shareholders.

b) Tata Steel

The Tata Corus acquisition was a much talked about and hyped one owing to the fact that it was the largest ever global acquisition ever by an Indian Company. The Anglo-Dutch steel company Corus Group Plc (Corus) was acquired for US$12.10 billion[4]. The ambitions of Tata Steel finally won it the bid for Corus which was making about four times more than the former. The deal catapulted the group to the fifth largest in the world and the second largest in Europe at that time.

Table 9.3.5: Pre and Post Merger Sales of Tata Steel (2000-2009)
(Figures in Rupees Crore)

Pre-merger			Post-merger		
Year	Sales	Percentage Increase over Previous Year	Year	Sales	Percentage Increase over Previous Year
2000	6886.28	-	2007	19762.57	15.27
2001	7759.44	12.68	2008	22191.80	12.29
2002	7607.48	-19.58	2009	24,315.77	9.57
2003	9793.27	28.73			
2004	11920.96	21.73			
2005	15876.87	33.19			
2006	17144.22	7.98			

Source: Compiled and Calculated from Tata Steel's Annual Reports 2000 to 2009. Retrieved from http://www.tatasteel.com/investors/performance/annual-report.asp and http://www.moneycontrol.com/financials/tatasteel/balance-sheet/TIS

Table 9.3.6: Pre and Post Merger Expenses of Tata Steel (2000-2009)
(Figures in Rupees Crore)

Pre-merger			Post-merger		
Year	Manufacturing & other expenses	Percentage Increase over Previous Year	Year	Manufacturing & other expenses	Percentage Increase over Previous Year
2000	4683.38		2007	10813.84	16.02
2001	6201.1	32.41	2008	11645.24	7.69
2002	6380.35	2.89	2009	15,525.99	33.33
2003	6480.13	1.56			
2004	7358.82	13.56			
2005	8658.41	17.66			
2006	9320.50	7.65			

Source: Compiled and Calculated from Tata Steel's Annual Reports 2000 to 2009. Retrieved from http://www.tatasteel.com/investors/performance/annual-report.asp and http://www.moneycontrol.com/financials/tatasteel/balance-sheet/TIS

Table 9.3.7: Pre-merger Ratio Analysis Tata Steel (2000-2006)

Year	Debt Equity Ratio	Current Ratio (C.R)	Fixed Assets Turnover Ratio (FATR)	Interest Coverage Ratio (ICR)	Net Profit (N.P) (%)
2000	1.08	1.16	0.84	2.21	6.14
2001	0.96	1.55	0.52	3.30	7.13
2002	1.42	1.63	0.89	1.75	2.69
2003	1.33	1.36	1.12	5.26	10.34
2004	0.75	1.02	1.19	23.39	14.65
2005	0.39	1.07	1.38	29.15	21.88
2006	0.26	1.15	1.23	45.27	20.45

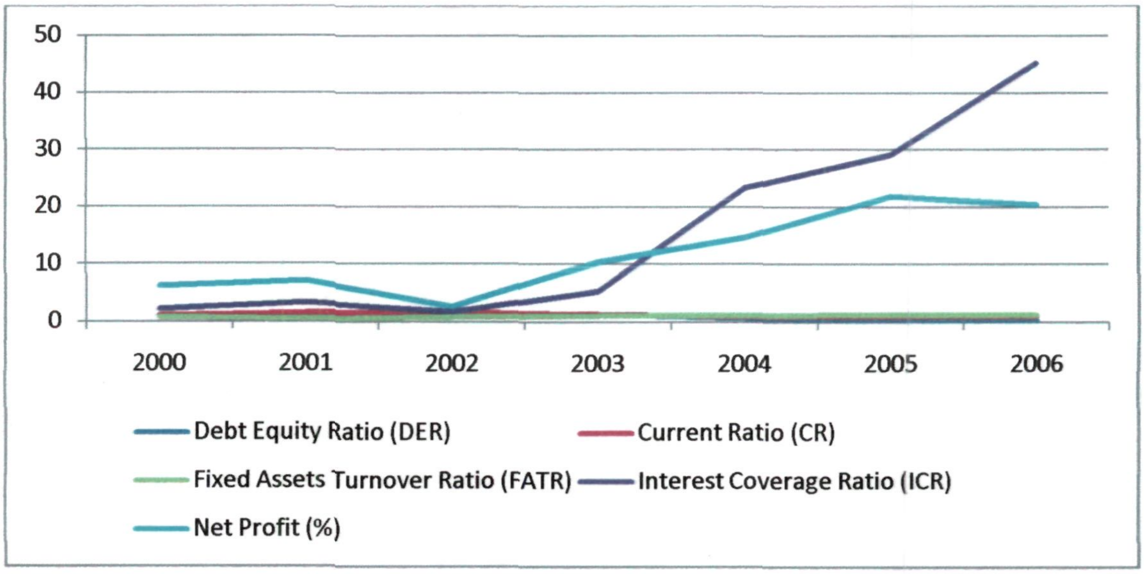
Source: Compiled and Calculated from Table 9.3.5, Appendix 21 and Appendix 22

Table 9.3.8: Post-merger Ratio Analysis Tata Steel (2007-2009)

Year	Debt Equity Ratio	Current Ratio (C.R)	Fixed Assets Turnover Ratio (FATR)	Interest Coverage Ratio (ICR)	Net Profit Ratio (N.P) (%)
2007	0.68	1.66	1.15	37.13	21.36
2008	0.66	1.22	1.33	9.10	21.12
2009	0.89	1.15	0.43	7.64	21.39

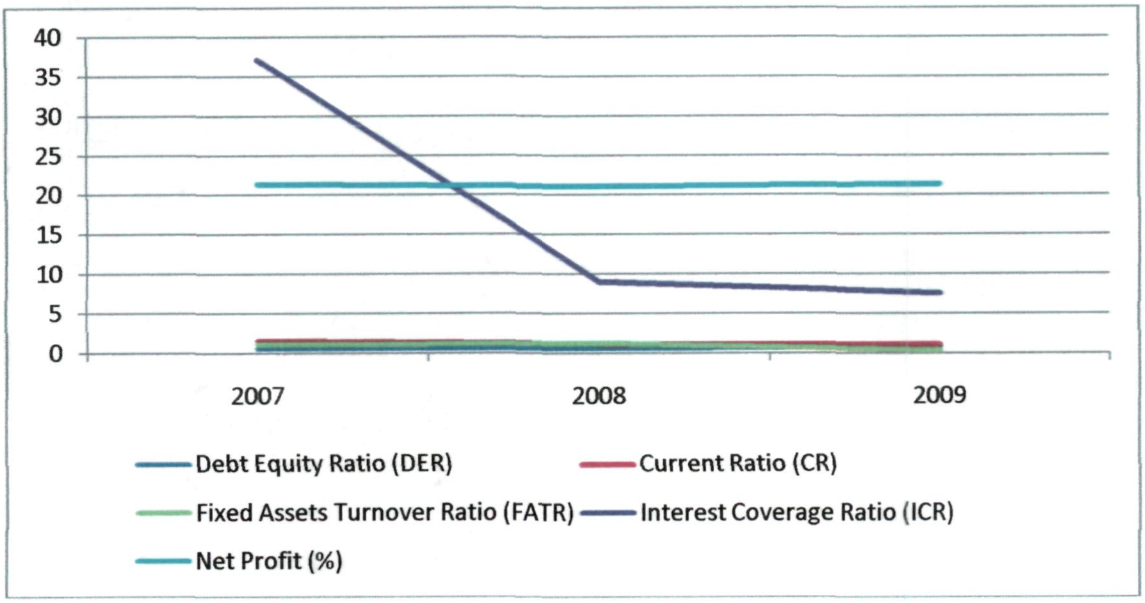
Source: Compiled and Calculated from Table 9.3.5, Appendix 21 and Appendix 22

Figure 9.3.2: Pre Merger Ratio Analysis of Tata Steel (Acquisition of Corus)



Source: Table 9.3.7

Figure 9.3.3: Post Merger Ratio Analysis of Tata Steel (Acquisition of Corus)



Source: Table 9.3.8

Detailed analysis of the financial condition of Tata Steel is discussed at length above where its acquisition of NatSteel is discussed.

Table 9.3.9 deals with the pre and post merger analysis of the Profitability, FATR and ICR.

1. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post merger Profitability of Tata Steel.**
   H_α (Alternative Hypothesis) = There is a relation between the Pre and Post merger Profitability of Tata Steel.

The correlation coefficient (r) between the two variables is worked out as -0.573 which is a moderate degree of negative correlation. The coefficient of determination (r^2) is 0.3283 indicating that only 32.83 percent of the variance is explained by this relationship. The regression equation Y on X shows that for every unit change in X which is the pre merger profitability of Tata Steel there is -0.02 units change in Y which is the post merger profitability of Tata Steel. The value of intercept is high at 21.71 indicating the effect of other factors. The value of t for three years of pre and post merger is calculated as 1.04. The table value when v=4 at $t_{0.05}$ is 2.78. The calculated value is less than the table value which leads to **acceptance of Null**

Hypothesis and rejection of Alternative Hypothesis. Hence the relation is statistically insignificant and there is no relation between the Pre and Post merger values.

The t -value is further calculated for seven years of pre merger and three years of post merger. It gives the t value at 2.14. The table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value is less than the table value which leads to **rejection of Alternative Hypothesis and acceptance of Null Hypothesis.** Hence the relation is statistically insignificant and there is no relation between the Pre and Post merger values of Profitability.

2. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post merger FATR of Tata Steel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre and Post merger FATR of Tata Steel.

The analysis of Pre and Post merger FATR reveals that the correlation coefficient (r) between the two is -0.49 which is a moderate degree of negative correlation. The coefficient of determination (r^2) is 0.2401 which means that only 24.01 percent of the variance is explained by this relationship. The Regression equation Y on X shows that for every unit change in X which is the pre merger FATR of Tata Steel there is a 2.33 unit's change in Y that is the post merger FATR of Tata Steel while the intercept at 1.99 is also not very high. The relation is further investigated for statistical significance which gives the t value at 1.07 for three years of pre and post merger. The table value of t when v=4 at $t_{0.05}$ is 2.78 which leads to **acceptance of Null Hypothesis and rejection of Alternative Hypothesis.** Hence the relation is statistically insignificant and there is no relation between the pre and post merger values.

The t-value is further calculated for seven years of pre merger and three years of post merger. It gives the t value at 0.23 while the table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value is less than the table value which leads to **acceptance of Null Hypothesis and rejection of Alternative Hypothesis.** The relation is statistically insignificant and there is no relation between the pre and post merger values.

3. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post merger ICR of Tata Steel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre and Post merger ICR of Tata Steel.

The relationship between the pre and post merger ICR of Tata Steel is studied next. The correlation coefficient (r) is -0.73 which is a moderate degree of negative correlation. The coefficient of determination (r^2) is 0.5388 which means that only 53.88 percent of the variance is explained by this relationship. The regression equation Y on X shows that for every unit change in X that is the pre merger ICR of Tata Steel there is a change of -0.108 units change in Y that is the post merger ICR of Tata Steel. The intercept is high at 18.49 indicating the role of other factors. The value of t is calculated 0.575 for three years of pre and post merger. The table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value is less than the table value which leads to **the rejection of Alternative Hypothesis and acceptance of Null Hypothesis.** The relation is statistically insignificant and there is no relation between the pre and post merger values.

The t value is further calculated for seven years of pre merger and three years of post merger which comes out to be 1.20. The table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value is less than the table value which leads to **rejection of Alternative Hypothesis and acceptance of Null Hypothesis.** The relation is statistically insignificant and there is no relation between the pre and post merger values.

Table 9.3.9: Pre and Post Merger Analysis of Profitability, FATR and ICR of Tata Steel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	**T-test
1. X = Pre-Merger Profitability of Tata Steel Y=Post-Merger Profitability of Tata Steel	=-0.573	0.3283	Y on X is **Y=-0.02X+21.71**	t=1.04* t=2.14**
2. X = Pre-Merger FATR of Tata Steel Y=Post-Merger FATR of Tata Steel	=-0.49	0.2401	Y on X is **Y=2.33X+1.99**	t=1.07* t=0.227**
3. X = Post-Merger ICR of Tata Steel Y= Pre-Merger ICR of Tata Steel	=-0.73	0.5388	Y on X is **Y=-0.108X+18.49**	t=0.575* t=1.2**

*Three Years of Pre and Post Merger Undertaken
**Seven Years of Pre and Three Years of Post Merger undertaken
Source: Compiled and Calculated from Table 9.3.7 and 9.3.8

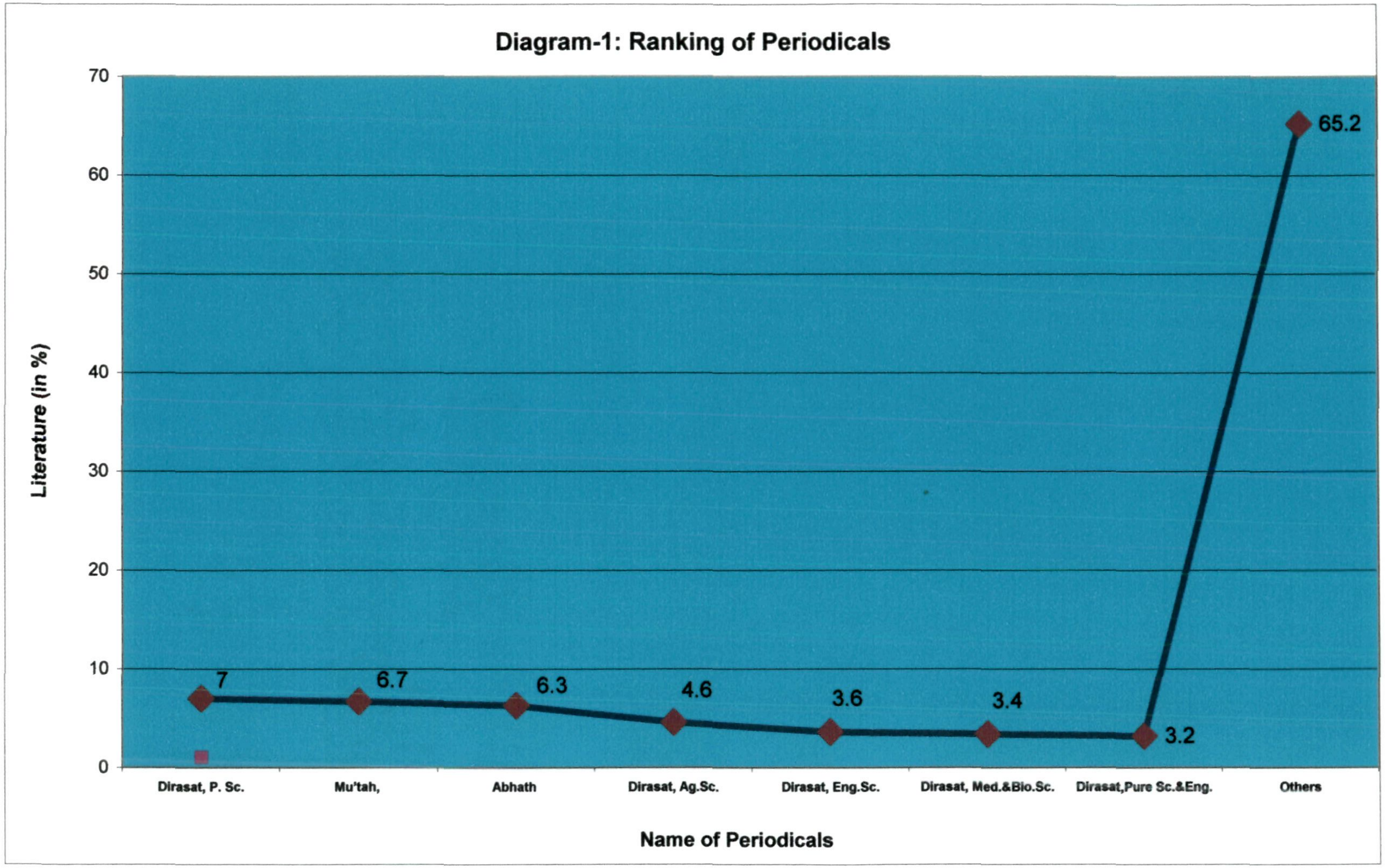


Diagram-1: Ranking of Periodicals
Literature (in %)
70
60
50
40
30
20
10
0
7
6.7
6.3
4.6
3.6
3.4
3.2
65.2
Dirasat, P. Sc.
Mu'tah,
Abhath
Dirasat, Ag.Sc.
Dirasat, Eng.Sc.
Dirasat, Med.&Bio.Sc.
Dirasat,Pure Sc.&Eng.
Others
Name of Periodicals

MPS is moved by -1584.93X which is very high. The value of intercept is also very high at 34175.36 which points towards the role of other factors. The high numbers indicate towards the volatility in the market as a result of the announcement of the highest ever acquisition by an Indian company. The t value is calculated as 2.9 for three years of post merger. The table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value being higher than the table value leads to **acceptance of Alternative Hypothesis and rejection of Null Hypothesis.** Hence there is a relation between the Post merger values of Profitability and MPS which is statistically significant.

Table 9.3.10: Pre and Post Merger Analysis of MPS and Profitability of Tata Steel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
4. X=Pre-Merger Profitability of Tata Steel Y=Pre Merger MPS of Tata Steel	=0.93	0.8591	X on Y is X=0.041Y+4.16 Y on X is Y=21.10X-60.86	2.82*
5. X=Post-Merger Profitability of Tata Steel Y=Post Merger MPS of Tata Steel	=-0.96	0.9139	X on Y is X=-0.00058Y+21.54 Y on X is Y=-1584.93X+34175.36	2.9**

*Seven Years of Pre Merger taken
**Three Years of Post Merger taken
Source: Compiled and Calculated from Tables 9.3.7, 9.3.8 and Appendix 22

Table 9.3.11 explores the relation between the Pre and Post merger MPS and EPS.

6. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post merger MPS of Tata Steel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre and Post merger MPS of Tata Steel.

The Hypothesis between the Pre and Post merger MPS is analyzed first. It gives the correlation coefficient (r) at -0.37 which is a moderate degree of negative correlation. The coefficient of determination (r^2) at 0.1376 indicated that only 13.76 percent of the variance is explained by this relationship. The regression equation Y on X showed that for every unit change in X that is the pre merger MPS of Tata Steel the post merger MPS is affected by -0.056 units. The intercept is high at 451.97 indicating that the post merger MPS is moved by other factors in a much stronger degree than the pre merger MPS. The t-value for three years of pre and post merger is calculated as 0.274 while the table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value is less than the table value which leads to **acceptance of Null Hypothesis and rejection of Alternative Hypothesis**. Hence there is no relation between the Pre and post merger MPS and the relation is statistically insignificant.

Further the t value is calculated for seven years of pre merger and three years of post merger which comes out as 1.84. The table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value is less than the table value which leads to **rejection of Alternative Hypothesis and acceptance of Null Hypothesis**. Hence there is no relation between the Pre and Post merger MPS in the longer run and it is statistically insignificant.

7. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post merger EPS of Tata Steel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre and Post merger EPS of Tata Steel.

The correlation coefficient (r) between the pre and post merger MPS is worked out as 0.86 which is a high degree of positive correlation. The coefficient of determination (r^2) is 0.729 which means that 72.9percent of the variance is explained by this relationship. The regression equation Y on X shows that for every unit change in X that is the pre merger EPS the post merger EPS is affected by 0.196 units while the intercept is high at 55.95 which indicates that other factors have an important role to play in the movement of EPS. The value of t for three years of pre and post merger is worked out as 1.76 while the table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value being lesser than the table value leads to **rejection of Alternative Hypothesis and acceptance of Null Hypothesis**. Hence there is no relation between the pre and post merger values of EPS and the relation is statistically insignificant.

The t value is then worked out for seven years of pre merger and three years of post merger which comes out as 2.33. The table value of t when v=8 at $t_{0.05}$ is 2.31. The calculated value is more than the table value which leads to **acceptance of Alternative Hypothesis and rejection of Null Hypothesis**. Hence there is a relation between the Pre and Post merger values of EPS which is statistically significant.

Table 9.3.11: Pre and Post Merger Analysis of MPS and EPS of Tata Steel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
6. X=Pre-Merger MPS of Tata Steel Y=Post Merger MPS of Tata Steel	-0.37	0.1376	Y on X is Y=-0.056X+451.97	t=0.274* t=1.84**
7. X=Pre-Merger EPS of Tata Steel Y=Post Merger EPS of Tata Steel	0.86	0.729	Y=0.196X+55.95	t=1.76* t=2.33**

*Seven years of Pre-merger taken

** Three years Post Merger taken

Source: Compiled and Calculated from Appendix 22

Table 9.3.12 gives an insight in to the Pre and Post merger Profit Rate and Profit Margin. The pre merger Profit Margin for Corus is very low at -0.020 while that for Tata Steel is at 0.12. The Post merger Profit Margin for Tata is 0.213 which is a 77.5 percent increase over the pre merger average. Corus was also benefiting from being associated with a group having a Profit margin which was much higher than what it was having in the pre merger period. The Pre merger Profit Rate of Corus is worked out as -0.021 while that for Tata Steel is at 0.118. The Post merger Profit Rate of Tata Steel is at 0.416 which is a 252.54 percent increase over the pre merger figure indicating extremely high operating efficiency. Hence the post merger averages reflect positively on the financial and operating efficiencies and performance.

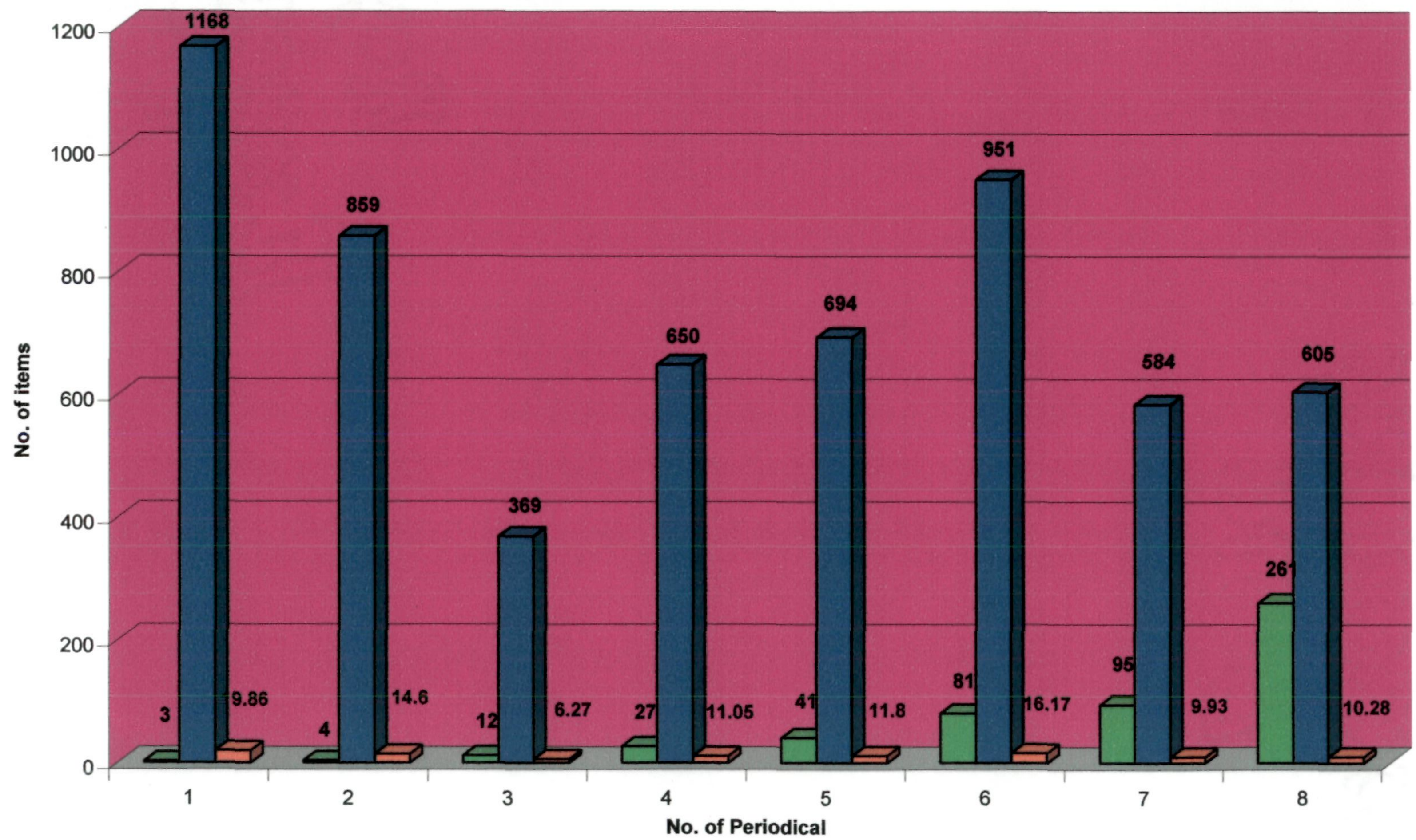
8. H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profit Margin

H_α (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profit Margin

9. H_0 (Null Hypothesis) = There is no relation between the Pre Merger and Post-merger Profit Rate

H_α (Alternative Hypothesis) = There is a relation between the Pre Merger and Post-merger Profit Rate

Diagram-2: Range of Frequency



9.4 Algoma Steel and Essar Steel : Pre and Post Merger Announcement

a) Algoma Steel

Algoma Steel was established in 1901 in Ontario, Canada and is an integrated producer of steel. it was acquired in the year 2007 by Essar Steel Algoma Inc. and was renamed as Essar Steel Algoma Inc. as the formers wholly owned subsidiary. Its products are sold in USA and Canada. Essar offered to acquire Algoma Steel for 1.85 billion CAD in cash and completed the acquisition on 20 June 2007.[5]

Pre Merger Analysis

The financial analysis of Algoma Steel prior to it being taken over by Essar Steel is done in Tables 9.4.1, 9.4.2 and 9.4.3. The turnover for the year 2001 was 912 millions of Canadian Dollars while cost of sales was 961 millions of Canadian dollars. The DER was at 0.81 reflecting the low proportion of debt in the capital structure. The CR was reasonable at 1.73 while the FATR was at 1.27. The WCTR was too high at 6.66 which needed the attention of the management for corrective action while the ICR was low at -9.81. The entity was in deep trouble with losses being reported to the tune of -39.8 percent. The mid-half of 2000 and the year 2001 saw turbulence in the global steel market. it led to lowered demand which resulted in lower production and selling prices, piling up on the misery of the company. Reorganization costs of $104 million were incurred for the period as well. At the same time attempts were made to restructure the company and reduce its debts through a strategy called 'the "Plan" which aimed to bring back the company to profitable state. For the year 2002 the sales increased by 13.05 percent against a fall of 9.78 percent in cost of sales. DER lowered to 0.63, FATR increased to 1.5 and WCTR decreased to 5.51 indicating an improvement in the operational efficiency of the concern which was reflected in the profitability being recorded at 4.17 percent. The ICR also moved up to 3.8 indicating the increased ability to finance debt expenses.

The improvement in the world market in terms of demand and selling price was a boost for the company. Also the restructuring plans undertaken with a view to reduce debt and enhance profitability were yielding positive results. For the year 2003 the sales rose by 10.40 percent against a 5.57 percent increase in cost of sales.DER and WCTR lowered down to 0.50 and 5.44 respectively. FATR at 1.73 reflected efficient use of fixed assets while the CR also improved to 2.30. The ICR again fell down to 0.64. The level of profitability however dropped to 0.74 percent. The US economy was facing difficult times and selling prices dropped by 22 percent for the period. However, the situation demanded more concerted efforts on the part of the management of the Algoma Steel to revamp its operations.

The year 2004 saw the sales rise by a whopping 58.42 percent against a 39.59 percent increase in cost of sales. The DER also fell substantially to 0.17 and WCTR to 2.15. The CR was fairly high at 5.39 while the FATR also rose to 2.80. The ICR at 29.46 reflected that the debt proportion was too low and there were more than adequate financial resources to finance it. The efficiency in operations was evident with profits being reported at 19.07 which was major boost to the plans put in by the management which resulted in the most profitable year being recorded in the company's history. The spurt in demand due to positive global economic outlook was an added advantage. For the year 2005, sales rose by 6.35 percent against a huge 39.59 percent increase in cost of sales. The DER and CR fell further to 0.01 and 2.69 respectively. FATR and WCTR were fairly stable at 2.98 and 2.93 respectively and ICR was still high at 21.77. Profitability dropped down to 12.50 percent. The high cost of sales can be attributed to increased level of production activity and high cost of raw material.

The year 2006 saw the sales rise by 1.15 percent against an increase of 4.04 percent in cost of sales. DER was at 0.01. CR rose to 3.71 while the FATR fell marginally to 2.88. WCTR notched up to 3.19. Profitability was recorded at a satisfactory level of 11.44 percent. The ICR was at 1622.5 due to the debt being very low. The year 2004 onwards saw the DER falling and the ICR rising at huge rates. The reason was that the company undertook the redemption of the 11 percent notes constituting the long term debt due to which the debt proportion fell drastically and it led to the changes in the figures of DER and ICR.

Algoma Steel had acquired financial strength on the basis of its dedicated efforts which enabled it to re-purchase $200 million of its common shares. On 15 April 2007 the company accepted the acquisition bid by Essar Steel Holdings Limited of India providing for the acquisition of all its common shares at $56 per share.

Post Merger Analysis

The analysis of the figures of Algoma Steel after the merger has been conducted is done in Tables 9.4.1, 9.4.2, 9.4.3and 9.4.4.

The financials of Essar steel which was the merging company were maintained for financial year ending in the month of March while for Algoma it was done for the month ending in December. Post merger there was a need to reconcile the financial statements and both were synced to make the financial statement for the month ending March. However the year 2007 and 2008 thus saw some disturbances due to changing of the financial year ending. The sales for the year 2007 are seen to fall at the rate of 53.01 percent while the cost of sales are seen to decrease by -53.01 but these figures are adjusted for the change in the financial year ending and hence these decrease in rates was not a cause of concern. The DER rose to 1.29 signaling influx of debt capital while the CR fell but was still comfortable at 1.42. The FATR fell to 0.45 indicating a fall in the operating efficiency while the WCTR increased to 4.99. The ICR was still high at 53.77. A profit of 1.62 percent signified that the company barely managed to break even.

For the financial year 2008 the sales surged 57.56& while the cost of sales moved up by 67.92 percent. DER notched up to 0.93 while the CR was at 1.43. The FATR moved up to 0.71 while the WCTR was very high at 7.79. The ICR became negative at -0.77 indicating the inability to finance debt while the company reported losses of -0.79 percent. The year 2009 saw sales jump by another 77.40 percent while the cost of sales surged by 67.93 percent. The DER fell to 0.93 indicating that the proportion of equity was again higher than that of debt. CR fell slightly to 1.35 while the operating efficiency was back on track with the FATR at 1.03. WCTR need to be looked into by the management as it was exceptionally high at 17.06 while the ICR at 0.91 was low. However the good news for the management was the profits being recorded at 8.53 percent.

Table 9.4.1: Pre and Post Merger Sales of Algoma Steel (2001-2009)

Figures in Millions of Canadian Dollars

Pre Merger			Post Merger		
Year	Sales	Percentage increase over previous year (%)	Year	Sales	Percentage increase over previous year (%)
2001	912	-	2007	911.4	-53.01
2002	1031	13.04825	2008	1436	57.56
2003	1138.2	10.39767	2009	2547.5	77.40
2004	1803.1	58.4168			
2005	1917.6	6.350175			
2006	1939.7	1.152482			

Source: Compiled and Calculated from Algoma Steel Annual Reports 2001 to 2009. Retrieved from http://www.algoma.com/investors/financial-reports/

Table 9.4.2: Pre and Post merger Cost of Sales of Algoma (2001-2009)

Figures in Millions of Canadian Dollars

Pre Merger			Post Merger		
Year	Cost of Sales	Percentage Increase over Previous Year (%)	Year	Cost of Sales	Percentage Increase over Previous Year (%)
2001	961		2007	779.1	-47.65
2002	867	-9.78148	2008	1308.3	67.92
2003	915.3	5.570934	2009	2197.0	67.93
2004	1024.7	11.95237			
2005	1430.4	39.59208			
2006	1488.2	4.040828			

Source: Compiled and Calculated from Algoma Steel Annual Reports 2001 to 2009. Retrieved from http://www.algoma.com/investors/financial-reports/

Table 9.4.3: Pre Merger Ratio Analysis of Algoma Steel (2001-2006)

Year	Debt Equity Ratio (DER)	Current Ratio (CR)	Fixed Assets Turnover Ratio (FATR)	Working Capital Turnover Ratio (WCTR)	Interest Coverage Ratio (ICR)	Profitability (%)
2001	0.81	1.73	1.27	6.66	-9.8125	-39.8
2002	0.63	1.73	1.5	5.51	3.8	4.17
2003	0.50	2.30	1.73	5.44	0.64	0.74
2004	0.17	5.39	2.8	2.15	29.46	19.07
2005	0.01	2.69	2.98	2.93	21.77	12.5
2006	0.009	3.71	2.88	3.19	1622.5	11.44

Source: Compiled and Calculated from Table 9.4.1, Appendix 27 and Appendix 28

Diagram-3: Country wise distribution

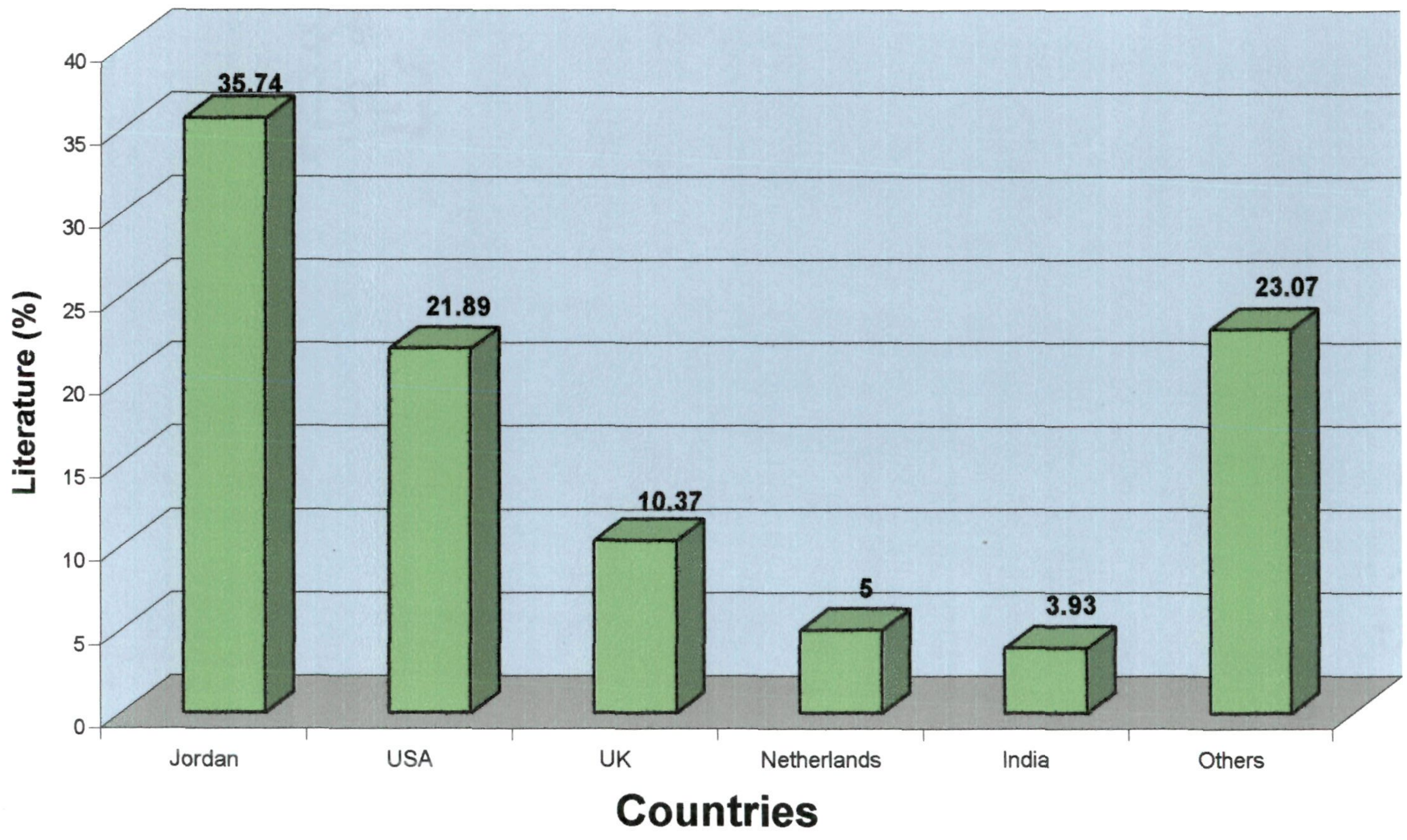
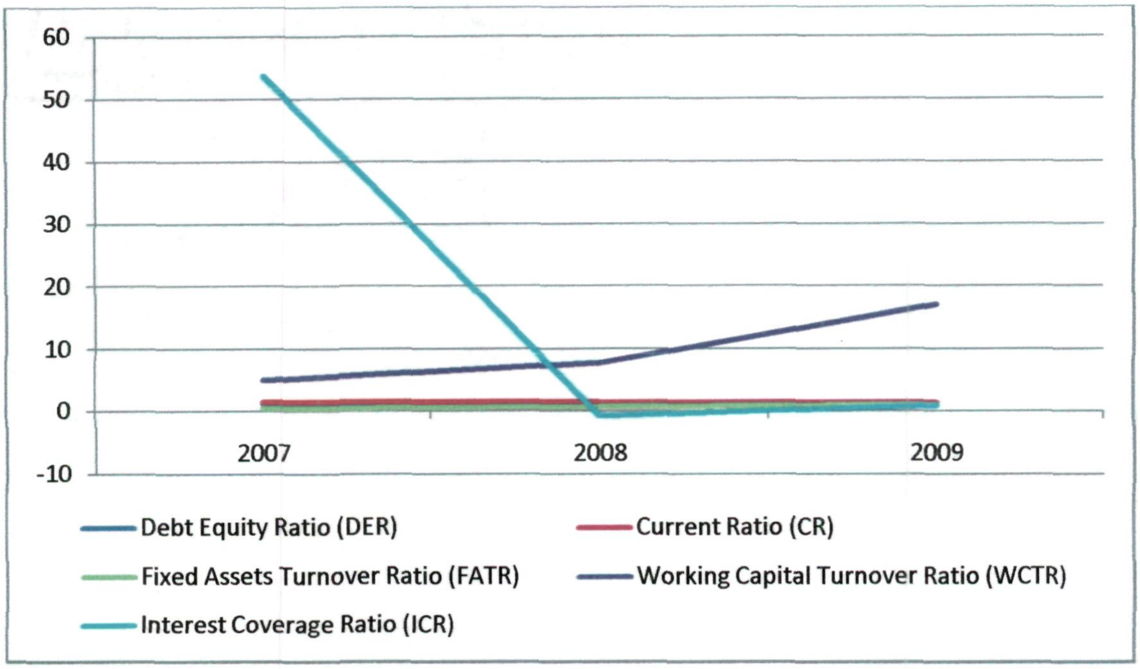


Figure 9.4.2: Post Merger Ratio Analysis of Algoma



Source: Table 9.4.4

Table 9.4.5 explores the relationship between the pre and post merger Profitability, FATR and ICR of Algoma Steel.

1. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post merger Profitability of Algoma Steel.**
   H_α (Alternative Hypothesis) = There is a relation between the Pre and Post merger Profitability of Algoma Steel.

The correlation coefficient (r) between the pre and post merger profitability of Algoma Steel is calculated as -0.39 which is a moderate degree of negative correlation. The coefficient of determination (r^2) is 0.1521 which means that just 15.21 percent of the variance is explained by this relation. The regression equation Y on X shows that for every unit change in X that is the pre merger profitability of Algoma Steel there is a change of -0.46 units in Y which is the post merger profitability of Algoma Steel. The intercept is at 9.66 which indicate the role of other factors. The t value for three years of pre and post merger is calculated as 3.05 while the table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value being more than the table value leads to **rejection of the Null Hypothesis and acceptance of the**

Alternative Hypothesis. It shows that the relation is statistically significant and there is a relation between the pre and post merger values.
The value of t is further calculated for six years of pre merger and three years of post merger which gives the t value at 0.14 while the table value of t when v=7 at $t_{0.05}$ is 2.37. The calculated value being less than the table value leads to **rejection of the Alternative Hypothesis and acceptance of the Null Hypothesis.** Hence the relation is statistically insignificant and there is no relation between the pre and post merger values here.

2. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post merger FATR of Algoma Steel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre and Post merger FATR of Algoma Steel.

The correlation coefficient (r) is worked out to be 0.39 which is a moderate degree of positive correlation. The coefficient of determination (r^2) is 0.1521 which means that only 15.21 percent of the variance is explained by this relationship. The regression equation Y on X shows that for every unit change in X which is the pre merger FATR of Algoma Steel there is a 1.25 unit change in Y which is the post merger FATR of Algoma Steel. The intercept is not very high at -2.89. The t value is calculated as 12.31 for three years of Pre and Post merger. The table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value is more than the table value which leads to **acceptance of Alternative Hypothesis and rejection of Null Hypothesis.** Hence the relation is statistically significant and there is a relation between the pre and post merger values of FATR of Algoma Steel.
The t value is further calculated for six years of pre merger and three years of post merger and it comes out as 3.06 while the table value of t when v=7 at $t_{0.05}$ is 2.37. The calculated value is again more than the table value which leads to **rejection of Null Hypothesis and acceptance of Alternative Hypothesis.** Hence there is a relation between the pre and post merger values of FATR and it is statistically significant.

3. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post merger ICR of Algoma Steel.**
   H_a (Alternative Hypothesis) = There is a relation between the Pre and Post merger ICR of Algoma Steel.

The next hypothesis examines the pre and post merger ICR of Algoma Steel. The correlation coefficient (r) is worked out as -0.47 which is a moderate degree of negative correlation. The coefficient of determination (r^2) is 0.2209 which means that just 22.09 percent of the variance is explained by this relation. The t value comes out as 1.01 for three years of pre and post merger while the table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value being less than the table value leads to **rejection of Alternative Hypothesis and acceptance of Null Hypothesis.** Hence there is no relation between the Pre and Post merger values and the relation is statistically insignificant.

The t value is further calculated for six years of per merger and three years of post merger and it comes out to be 0.66. The table value of t when v=7 at $t_{0.05}$ is 2.37. The calculated value is again lesser than the table value which leads to **rejection of Alternative Hypothesis and acceptance of Null Hypothesis.** Hence there is no relation between the pre and post merger values of ICR and the relation is statistically insignificant.

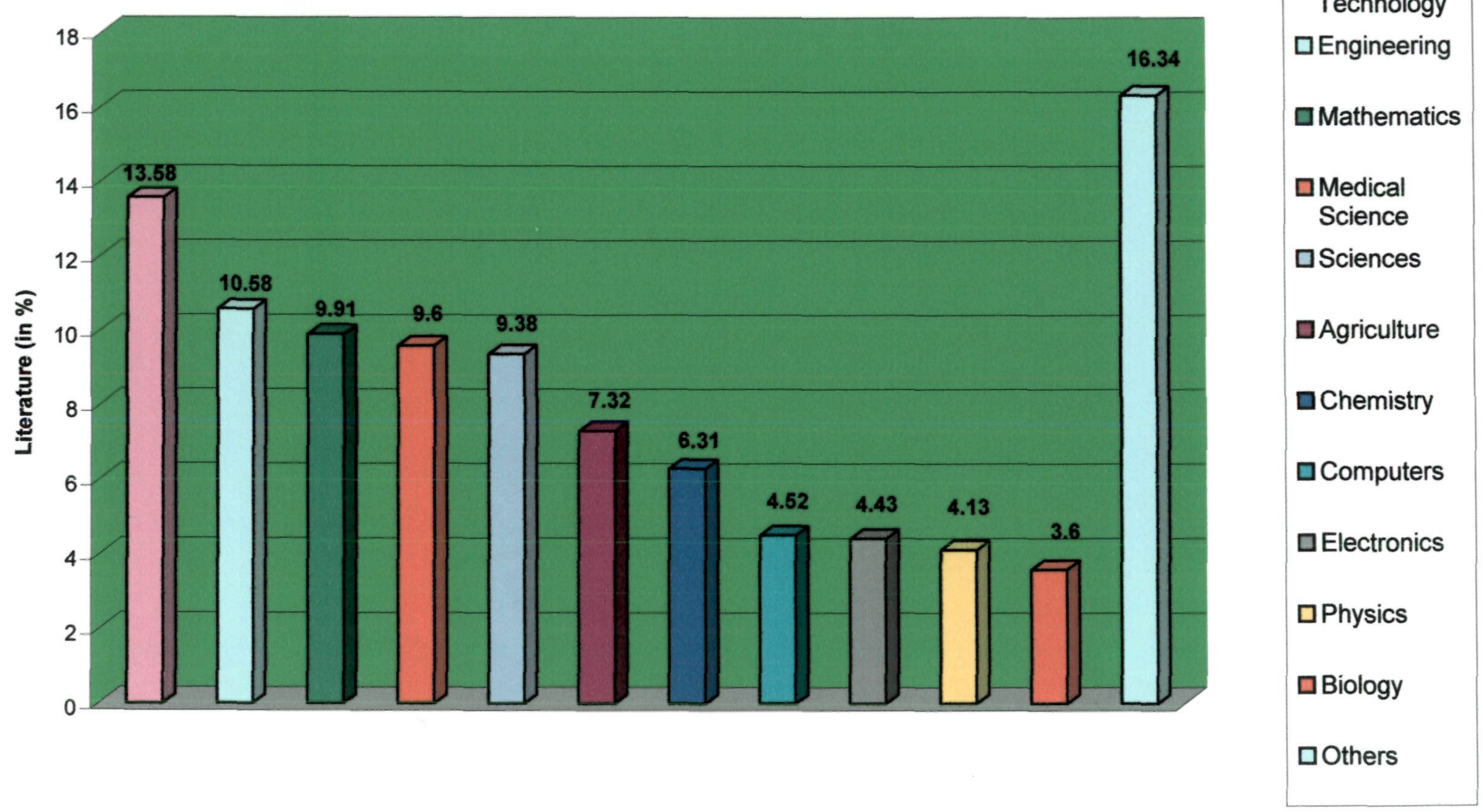
Hence it is seen here that in case of Profitability, the merger had an effect only in the longer run. FATR was affected by the merger both in the long and short run while ICR was not affected at all. It should be noted however that the acquisition took place only in recently and it is generally observed that the effect of a merger or acquisition take time to reflect in the financial results of the relevant concerns. The acquisition gave Essar Steel a strong foothold in the North American market. it had an opportunity to exploit the superior technology and wider market available as a result of the deal.

Table 9.4.5: Pre and Post Merger Analysis of Profitability, FATR and ICR of Algoma Steel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	**T-test
1. X=Post-Merger Profitability of Algoma Y= Pre-Merger Profitability of Algoma	=-0.39	0.1521	Y on X is Y=-0.46X+9.66	t=3.05* t=0.138**
2. X=Post-Merger FATR of Algoma Y= Pre-Merger FATR of Algoma	=0.39	0.1521	Y on X is Y=1.25X-2.89	t=12.31* t=3.06**
3. X=Post-Merger ICR of Algoma Y= Pre-Merger ICR of Algoma	=-0.47	0.2209	Y on X is Y=-0.16X+26.84	t=1.01* t=0.66**

*Three Years of Pre and Post Merger Undertaken
**Six Years of Pre and Three Years of Post Merger undertaken
Source: Compiled and Calculated from Table 9.4.3 and Table 9.4.4

Diagram-4: Subject-wise distribution



The year 2004 saw Essar Steel register an increase of 127.83 percent in sales while the cost of sales by 136.04 percent. DER fell to 4.01 which were encouraging while the CR and WCTR rose to 1.61 and 0.84. The WCTR was at 2.56 and ICR was at 1.02. A profit was recorded at 1.62 percent. The analysis showed that Essar Steel was making great improvements in the operational and financial efficiency which was reflected in the results. For the year 2005, sales rose further by 65.17 percent and cost of sales by 36.96 percent. DER fell to 2.74 while all other ratios showed improvement with CR at 2.48, FATR at 1.33 and WCTR at 4.28. The ICR bettered to 2.81. The profit registered at 9.65 percent was the highlight of the financial affairs which was a reward to the efforts of the management and the workers. For the year 2006, sales rose by 1.08 percent against a rise of 18.41 percent in cost of sales. DER fell further to 1.99, FATR to 0.65 and WCTR to 2.64. CR increased to 2.50 and ICR to 2.86. Profitability level was however maintained at relatively same position at 8.58 percent which was a promising sign for Essar Steel. The boost in the domestic demand and increase in the volume of exports were critical factors behind the increase in the sales. The fragmented steel industry was making headway progress in consolidation worldwide.

Post Merger Analysis

The financial year 2007 started on a positive note for Essar Steel with the sales shooting up by 32.54 percent and cost of sales by 33.14 percent. The DER furthered lowered down to 1.55 showing that the company was effectively reducing the debt burden in its capital structure. CR also lowered down to 1.26 while the WCTR increased to 9.02. FATR also improved marginally to 0.79. Profits reduced slightly to 5.33 percent. The US economy showed signs of recovering from the recession though it still required time. The wave of consolidation in the global steel industry was evident from the major deals, i.e. the Arcelor-Mittal and Tata Corus deal that created many records. The year 2008 saw the positive trends in Essar Steel again with sales rising by 31.11 percent against a rise of 38.64 percent in cost of sales. Proportion of debt was further reduced with DER reducing to 1.32 signaling a move towards self reliance. CR also fell to 1.16 and so did the WCTR to 8.85 and ICR to 1.84. FATR however rose to 1.04 indicating efficient utilization of fixed assets. Profits fell to 4 percent. De-leveraging resulted in the improvement of the credit profile as was evident in the rating published by ICRA Ltd (An associate of Moody's Investors Service).

The deal to acquire Canadian Steel major Algoma Steel was for $1.63 billion. Though it was not in the same league as was the Tata-Corus and Arcelor-Mittal deal, it helped Essar deal gain a significant foreign hold. The year 2009 saw sales rise by 8.80 percent against 8.91 percent rise in cost of sales. The DER rose slightly to 1.53, CR to 1.68, ICR to 2.28 and FATR to 1.12. WCTR fell slightly to 6.29 and profits slumped to 1.59 percent. The company made concerted efforts in expansion and restructuring along with maintaining the desired level of liquidity

Table 9.4.6: Pre and Post Merger Sales of Essar Steel (2001-2009)

(Figures in Rupees Crore)

Pre Merger			Post Merger		
Year	**Sales**	**Percentage increase over previous year**	**Year**	**Sales**	**Percentage increase over previous year**
2001	2297.13		2007	8194.35	32.53933
2002	2934.64	27.75246	2008	10743.32	31.10643
2003	1625.46	-44.6113	2009	11688.3	8.795977
2004	3703.27	127.829			
2005	6116.71	65.17051			
2006	6182.58	1.076886			

Source: Compiled and Calculated from Essar Steel Annual Report 2001 to 2009. Retrieved from http://www.essar.com/common.aspx?cont_id=V+5qa1L+feY= and http://www.moneycontrol.com/financials/essarsteel/balance-sheet/ES01

Table 9.4.7: Pre and Post Merger Cost of Sales of Essar Steel (2001-2009)

(Figures in Rupees Crore)

Pre Merger			Post Merger		
Year	**Cost of Sales**	**Percentage increase over previous year**	**Year**	**Cost of Sales**	**Percentage increase over previous year**
2001	1655.92		2007	5773.92	33.14332
2002	2420.06	46.14595	2008	8004.75	38.63632
2003	1132.85	-53.1892	2009	8717.62	8.905587
2004	2673.93	136.0357			
2005	3662.28	36.96245			
2006	4336.62	18.41312			

Source: Compiled and Calculated from Essar Steel Annual Report 2001 to 2009. Retrieved from http://www.essar.com/common.aspx?cont_id=V+5qa1L+feY= and http://www.moneycontrol.com/financials/essarsteel/balance-sheet/ES01

Table 9.4.8: Pre Merger Ratio Analysis of Essar Steel (2001-2006)

Pre Merger						
Year	**Debt Equity Ratio (DER)**	**Current Ratio (CR)**	**Fixed Assets Turnover Ratio (FATR)**	**Working Capital Turnover Ratio (WCTR)**	**Interest Coverage Ratio (ICR)**	**Profitability (%)**
2001	5.52	1.7	0.44	2.54	0.39	-15.06
2002	-26.96	1.22	0.61	4.63	-0.56	-40.87
2003	12.28	1.37	0.35	1.63	1.22	0.09
2004	4.01	1.61	0.84	2.56	1.02	1.62
2005	2.74	2.48	1.33	4.28	2.81	9.65
2006	1.99	2.50	0.65	2.64	2.86	8.58

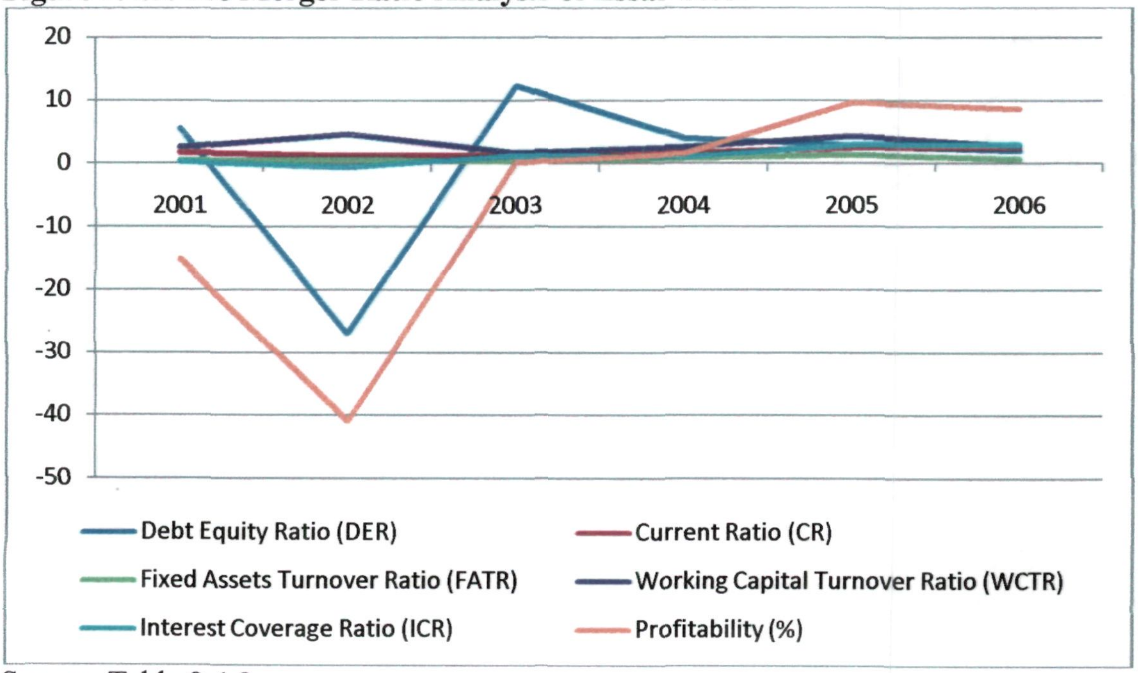
Source: Compiled and Calculated from Table 9.4.6, 9.4.8 and 9.4.9

Table 9.4.9: Post Merger Ratio Analysis of Essar Steel (2007-2009)

Post-Merger						
Year	**Debt Equity Ratio (DER)**	**Current Ratio (CR)**	**Fixed Assets Turnover Ratio (FATR)**	**Working Capital Turnover Ratio (WCTR)**	**Interest Coverage Ratio (ICR)**	**Profitability (%)**
2007	1.55	1.26	0.79	9.02	2.14	5.33
2008	1.32	1.16	1.04	8.85	1.84	4.00
2009	1.53	1.68	1.12	6.29	2.28	1.59

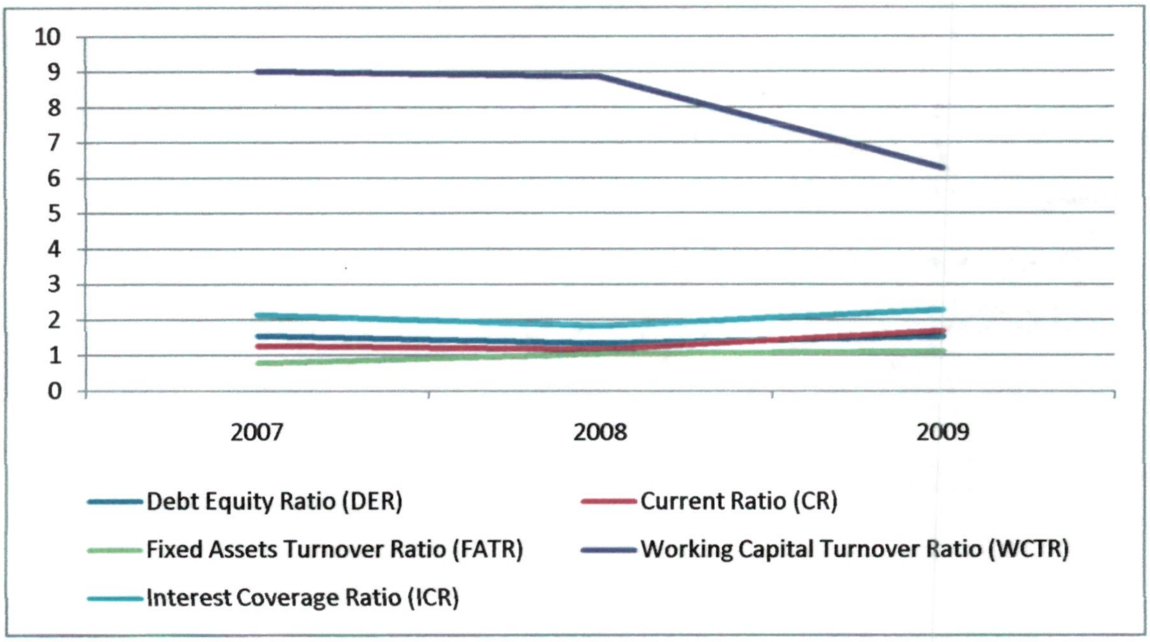
Source: Compiled and Calculated from Table 9.4.6, 9.4.8 and 9.4.9

Figure 9.4.3: Pre Merger Ratio Analysis of Essar Steel



Source: Table 9.4.8

Figure 9.4.4: Post Merger Ratio Analysis of Essar Steel



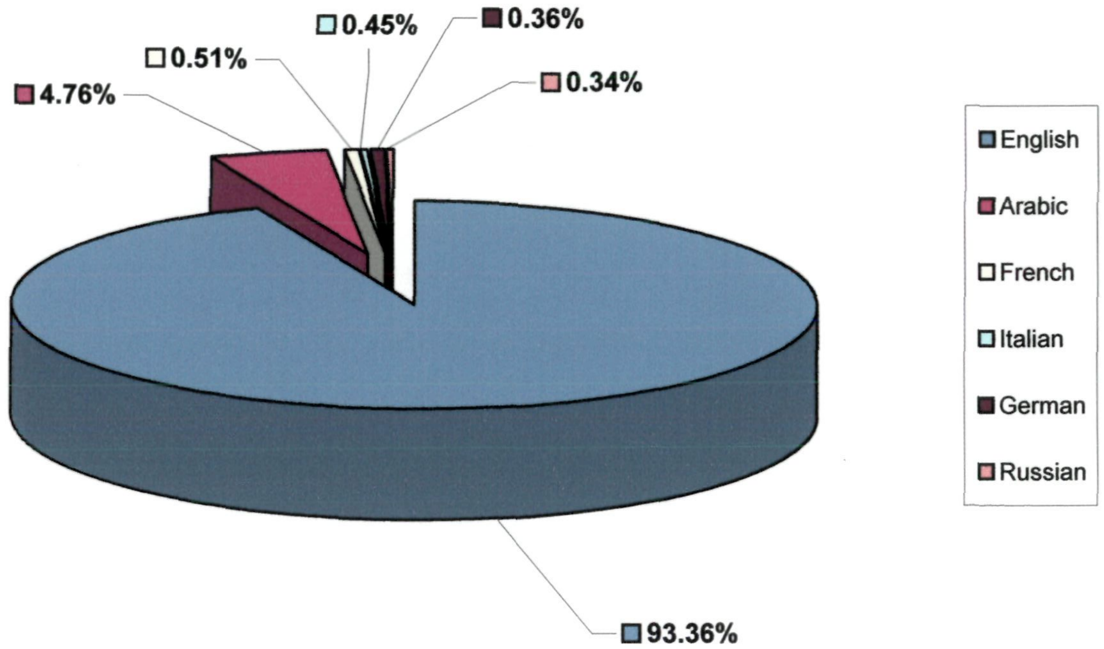
Source: Table 9.4.9

Table 9.4.10 deals with the Hypothesis to test the relation between the Pre and post merger profitability, FATR and ICR of Essar Steel.

1. **H_0 (Null Hypothesis) = There is no relation between the Pre and Post merger Profitability of Essar Steel.**
   H_α (Alternative Hypothesis) = There is a relation between the Pre and Post merger Profitability of Essar Steel

The correlation coefficient (r) between the Pre and post merger profitability is calculated as -0.69 which is a moderate degree of negative correlation while the coefficient of determination (r^2) is 0.4761. It shows that 47.61 percent of the variance is explained by this relationship. The regression equation Y on X shows that for every unit change in X which is the pre merger profitability of Essar Steel there is a -0.30 unit's change in Y which is the post merger profitability of Essar Steel. The intercept is at 5.62 indicating that other factors also have a role in the movement of the post merger profitability. The value of t is calculated as 1.09 for three years of pre and post merger while the table value of t when v=4 at $t_{0.05}$ is 2.78. Hence the calculated value being less than the table value leads to **rejection of the Alternative Hypothesis and acceptance of the Null Hypothesis.** Hence there is no relation between the pre and post merger values and the relation is statistically insignificant.

Diagram 5: Language-wise distribution



The coefficient of determination (r^2) is 0.033 which shows that for a very small percentage of the variance is explained. The regression equation Y on X shows that for every unit change in X that is the pre merger ICR of Essar Steel there is a -0.39 unit's change in Y which is the post merger ICR of Essar Steel. The intercept at 2.18 indicates that when the slope is zero there is 2.18 units change in the post merger ICR of Essar Steel. The value of t is worked out as 0.226 for three years of pre and post merger while the table value of t when v=4 at $t_{0.05}$ is 2.78. The calculated value being less than table value leads to acceptance of the Null Hypothesis and rejection of the Alternative Hypothesis. Hence the relation is statistically insignificant. There is no relation between the pre and post merger values of ICR.

The t value is further calculated for six years of pre merger and three years of post merger. It comes out to be 0.99. The table value of t when v=7 at $t_{0.05}$ is 2.37. The calculated value is again less than the table value which leads to acceptance of Null Hypothesis and rejection of Alternative Hypothesis. Hence there is no relation between the Pre and post merger values of ICR and it is statistically insignificant.

Table 9.4.10: Pre and Post Merger Analysis of Profitability, FATR and ICR of Essar Steel

Variables	*Correlation Coefficient (r)	*Coefficient of Determination (r^2)	*Regression Equations	T-test
1. X= Pre-Merger Profitability of Essar Steel Y=Post-Merger Profitability of Essar Steel	=-0.69	0.4761	**Y on X is Y=-0.30X+5.62**	t=1.09* t=0.84**
2. X= Pre-Merger FATR of Essar Steel Y=Post-Merger FATR of Essar Steel	=0.012	0.0001	Yon X is **Y=0.0073X+0.97**	t=0.18* t=1.26**
3. X= Pre-Merger ICR of Essar Steel Y=Post-Merger ICR of Essar Steel	=-0.182	0.033	Y on X is **Y=-0.39X+2.18**	t=0.226 t=0.99

*Three Years of Pre and Post Merger Undertaken
**Six Years of Pre and Three Years of Post Merger undertaken
Source: Compiled and Calculated from Table 9.4.8 and 9.4.9

Diagram-6: Language of Periodicals

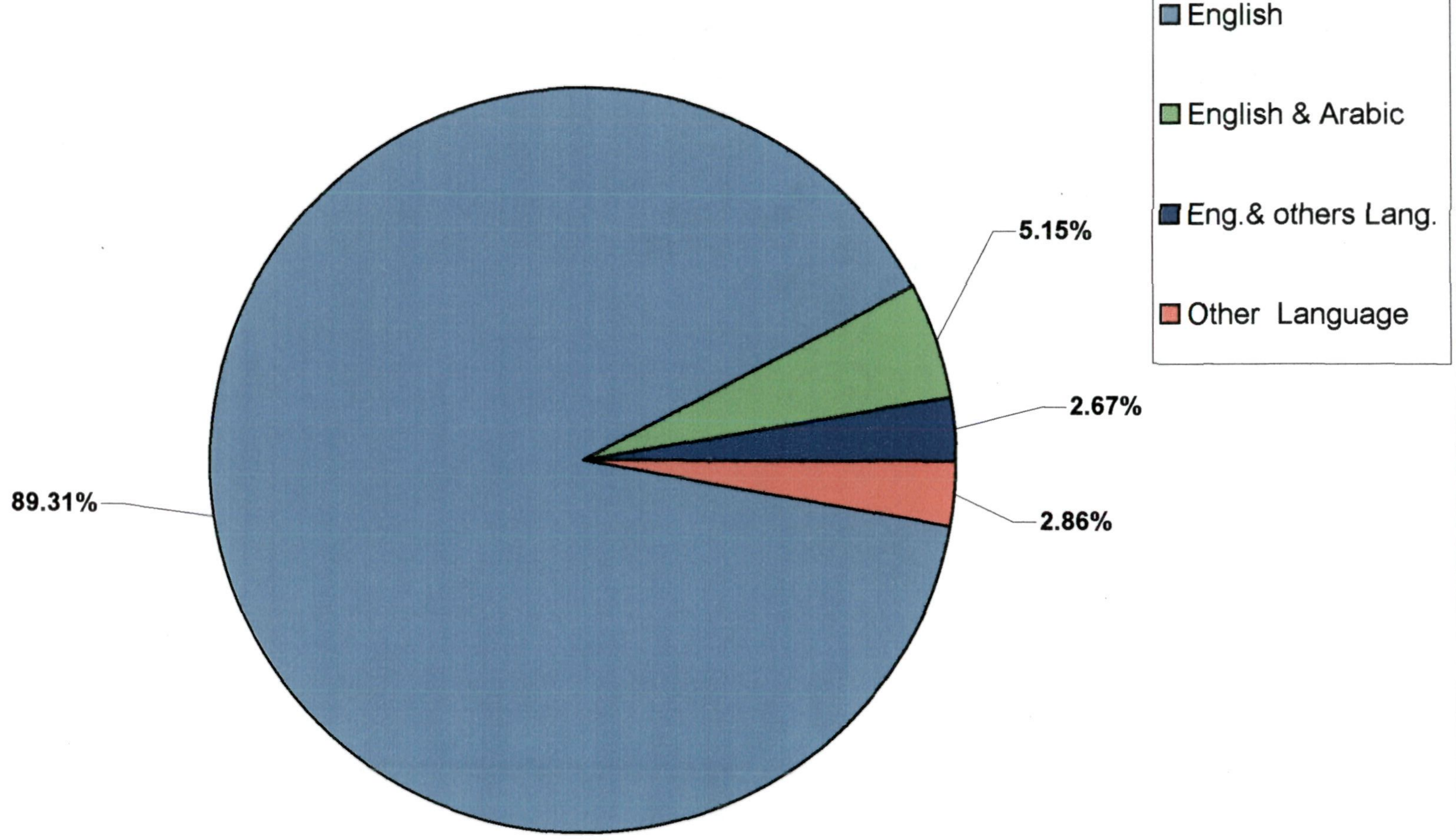


Table 9.4.12 examines the Pre and post merger Profit Margin and Profit Rate for Essar Steel. The Pre merger Profit Margin for Algoma steel is 0.014 while that for Essar Steel is -0.060. The Post merger Profit Margin for Algoma Steel is 0.031 while for Essar Steel it is 0.036. The Profit margin for Algoma steel improves by 127.94 percent while that for Essar Steel it improves by 700 percent. Hence both the entities showed marked financial improvement on an average. The Pre merger Profit Rate for Algoma Steel is 0.032 while that for Essar Steel is 0.0238. The post merger Profit Rate for Algoma Steel is 0.024 while that for Essar Steel is 0.0238. The post merger Profit Rate for Algoma Steel falls by -25.23 percent while for Essar Steel it increases by 316.36 percent post merger. Hence the operating efficiency for Algoma Steel falls while that for Essar Steel increases.

Table 9.4.12: Pre and Post Merger Profit Rate and Profit Margin for Algoma and Essar Steel

	Net Sales **Profit Margin= $\frac{PAT}{NS}$**			**Total Assets** **Profit Rate= $\frac{PAT}{TA}$**		
	Pre-merger Average	**Post-merger Average**	**Percentage Change**	**Pre-merger Average**	**Post-merger Average**	**Percentage Change**
a) Algoma	0.013625	0.031	127.94	0.03205	0.024	-25.23
b) Essar Steel	-0.060	0.036	700	-0.011	0.0238	316.36

Source: Compiled and Calculated from Table 9.4.1, 9.4.6, Appendix 25, Appendix 26, Appendix 27 and Appendix 28

Despite the huge losses incurred initially in the year 2001 and 2002, Essar Steel recovered and posted profits at a steady rate from 2003 onwards. The test of various hypotheses reveals that the merger did not have an effect on any of the parameters, i.e. Profitability, FATR, ICR or EPS. For Algoma Steel the Profit margin increased by 127.94 percent and the Profit rate fell by -25.23 percent. For Essar Steel both Profit Margin and Profit Rate increased substantially by 700 percent and 316.36 percent respectively.

9.5 Conclusion

The analysis presented in this chapter sheds light on the financial viability of major Mergers and Acquisitions (M&A's) deals that have taken place in the international arena. Cross border merger and acquisitions are mainly undertaken for global recognition and also to get access to modern technology, wider markets and customer base. Tata undertook the acquisition of NatSteel in Singapore and Corus in UK. Both the deals were massive and Tata steel entered the list of the top 10 producers of steel in the world. NatSteel was a profitable undertaking but after the association with Tata Steel its profits registered a faster rate of growth and Tata Steel also benefitted from favorable market reaction and enhanced production facilities. Corus was also not registering huge profits before the acquisition but it did make a turnaround after the merger. The financial profitability of Tata Steel after the merger was not affected positively and the market reaction in terms of the MPS was also not positive. The operational capacity however expanded by leaps and bounds and Tata Steel got access to European markets. Another major player Essar Steel also joined the global consolidation brigade of steel Industry and acquired Algoma Steel of Canada which gave it access to North America markets. The financial performance of both Essar Steel and Algoma Steel were not very impressive and it is felt that the whole picture of the merger was yet to be felt in the performance.

Having analyzed the mergers on the international arena the, Researcher moves on to identify the problems faced in effecting Mergers and Acquisitions (M&A's) deals and also suggest strategies for confronting the same which is done in the next Chapter.

9.6 References

[1] Tata Steel Annual Report, 2008. Retrieved from http://www.tatasteel.com/investors/performance/annual-report.asp and ttp://www.moneycontrol.com/financials/tatasteel/balance-sheet/TIS

[2] "About Corus" Retrieved from http://www.corusgroup.com/en/company/about_corus/, (12 October, 2010)

[3] "Tata Corus Acquisition" Retrieved from http://en.wikipedia.org/wiki/Tata_Corus_acquisition, (20 December, 2009)

Diagram-7: Periodicals publishing in English & Arabic

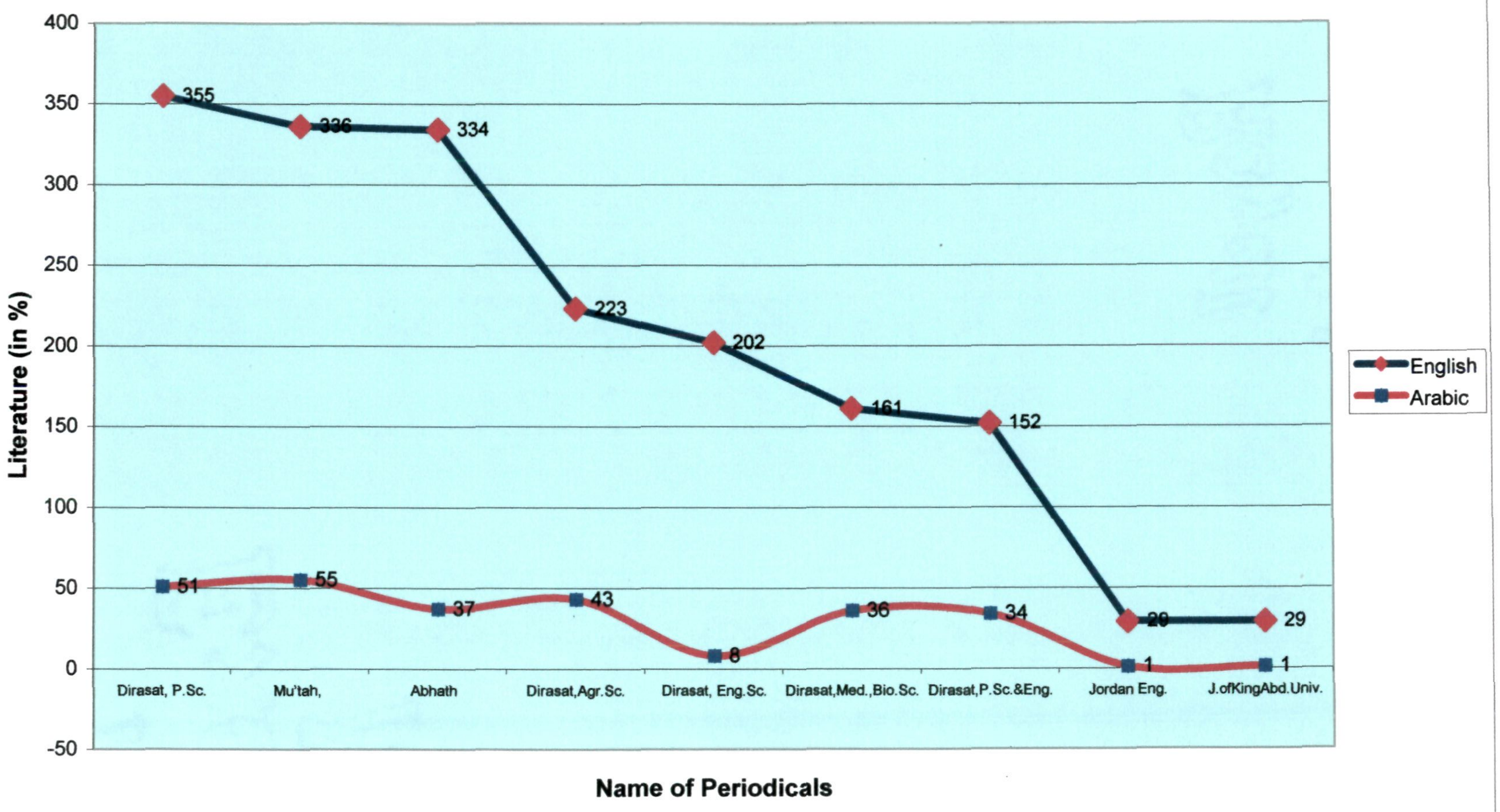
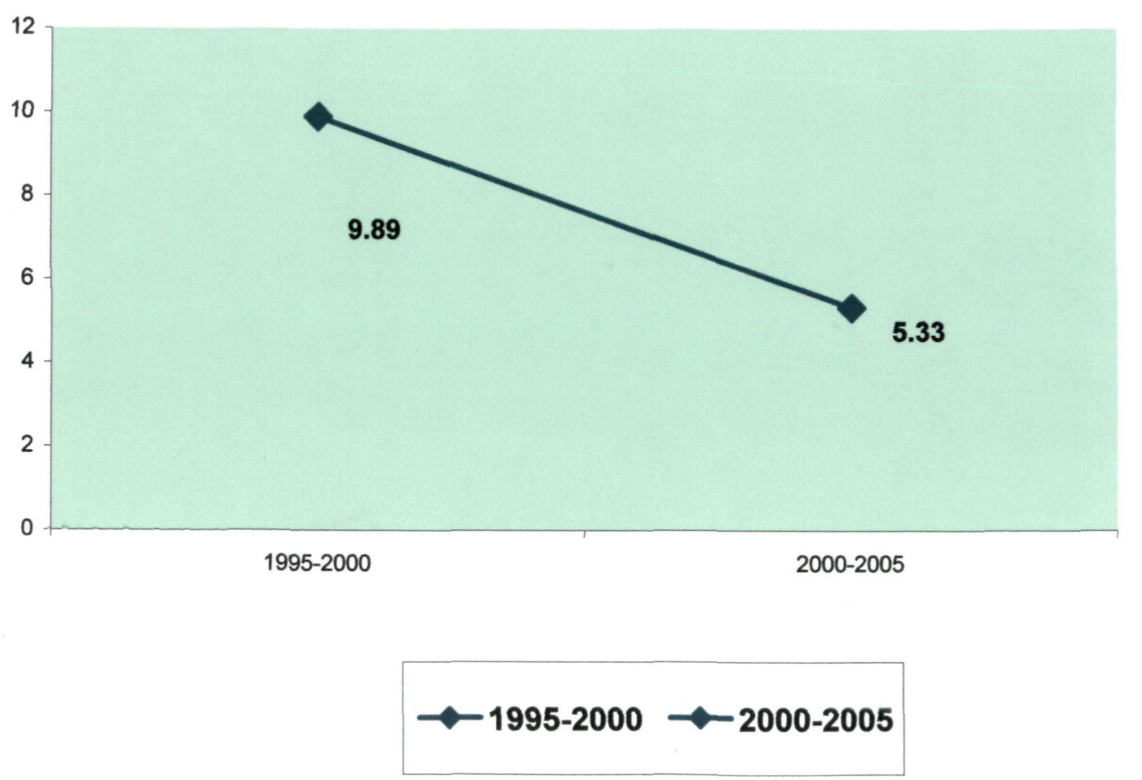


Diagram-8: Growth rate



Chapter 10

Problems, Strategies, Implications and Prospects

10.1 Introduction

10.2 Overview of the Present Mergers and Acquisitions (M&A's) Scenario

10.3 Problems Encountered in Effecting Mergers and Acquisitions(M&A's)

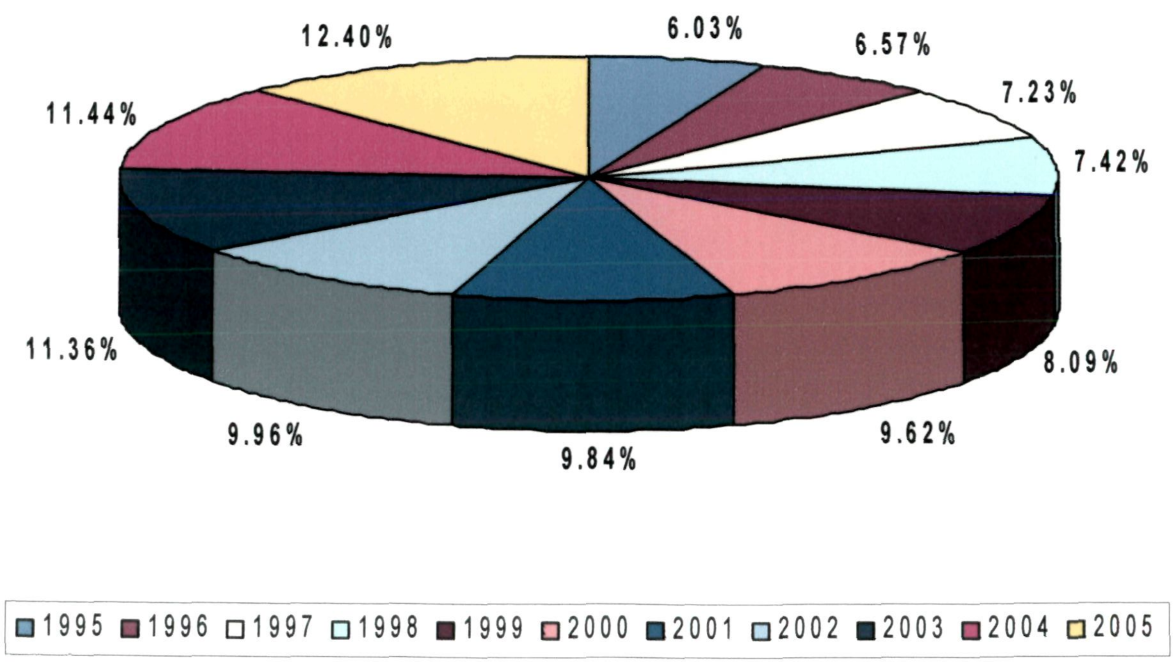
10.4 Strategies and Implications for Dealing with the Problems

10.5 Future Prospects for Mergers and Acquisitions (M&A's)

10.6 Conclusion

10.7 References

Diagram -9: Year-wise distribution



the domestic market. In the previous chapters these are analysed and investigated from financial, accounting and other aspects. Here an attempt is made by the Researcher to provide a synoptic view of the problems and issues at hand. Further prospects for Mergers and Acquisitions (M&A's) are studied strategies are carved out to make the most of the available opportunities, maximise potential and also deal with the various challenges at hand. Mergers and Acquisitions (M&A's) as a tool is generally used by firms to enhance and diversify its present capacity in order to maximise growth and development for the purpose of which firms are willing to undertake major restructuring and revamping. The main idea is to gain entry into markets or achieve higher economies of scale and operations by creation of synergies. However the aim of achieving growth, diversification, development and expansion to a large extent depends on effective implementation of the plans and strategies that are chalked out for the purpose.

There is generally a lot of excitement and anticipation regarding a Mergers and Acquisitions (M&A's) when undertaken especially when big names are involved as in the case of Chrysler-Daimler, Tata-Corus, Essar-Algoma, JSW-SISCOL, SAIL with IISCO and VISL or Arcelor-Mittal. However there are often a lot of surprises and disappointments faced later when the expected synergies do not materialize for the management, employees and the stockholders.

10.3 Problems Encountered in Effecting Mergers and Acquisitions (M&A's)

While indulging in Mergers and Acquisitions (M&A's) corporate firms are faced by a host of challenges and issues. Along with the prospect of growth, expansion and development the merging entities also face a high proposition of risk. The twin objectives of cost reduction and growth have to be achieved in tandem. It is even more difficult to achieve growth after the merger as compared to reduce cost[2].

Despite the popularity of Mergers and Acquisitions (M&A's) as a tool for investment, it is suggested by a large number of studies that the rate of **success of mergers is not very high**. Porter (1987)[3] in his study found that 33 US companies out of those he studied for the period between 1950 to 1986 had divested more than half of what they had acquired. In this period it was reported that the rate of failure of such strategic alliances was estimated at between 50 to 70 percent. The alliances undertaken were proving to be risky and prone to failure due to a large number of inherent problems persistent relating to management. However the situation in 1990's led to a spate of increase in the number of alliances due to the prevalent competitive global scenario where survival was the key factor. The failure or unsuccessful merger might have result in lower profitability; lower market prices, selling off of the acquired firm. Despite this the mode of consolidation and restructuring is inevitable and it warrants for an even more concerted effort by the management in the pre and post merger stages.

Technological Obsolescence is a major motive for entering into alliances. For the purpose of up gradation of research and development and technological processes M&A is becoming a popular strategic tool. In the case of the mergers with enterprises running into losses like Visvesvaraya Iron and Steel (VISL), Indian Iron and Steel Company (IISCO) with one of the largest producers of steel in India that is SAIL, one of the major motive is to let these companies flourish under the protection of a profitable enterprise and benefit from its technological competence. In case of foreign acquisitions as is seen in the case of Tata acquiring NatSteel in Thailand and Corus in Europe or Essar taking over Canada's Algoma Steel, acquiring the technological competence of these undertakings is definitely a major driving force behind the merger or acquisition. However, a majority of the studies still reported that a majority of the mergers fail which is realised in the form of various indicators like fall in the stock price of the acquiring firm's stock, decline in profitability of the acquired firm. It should be ensured that while integrating the processes and functions it is also important to integrate their enterprise and software

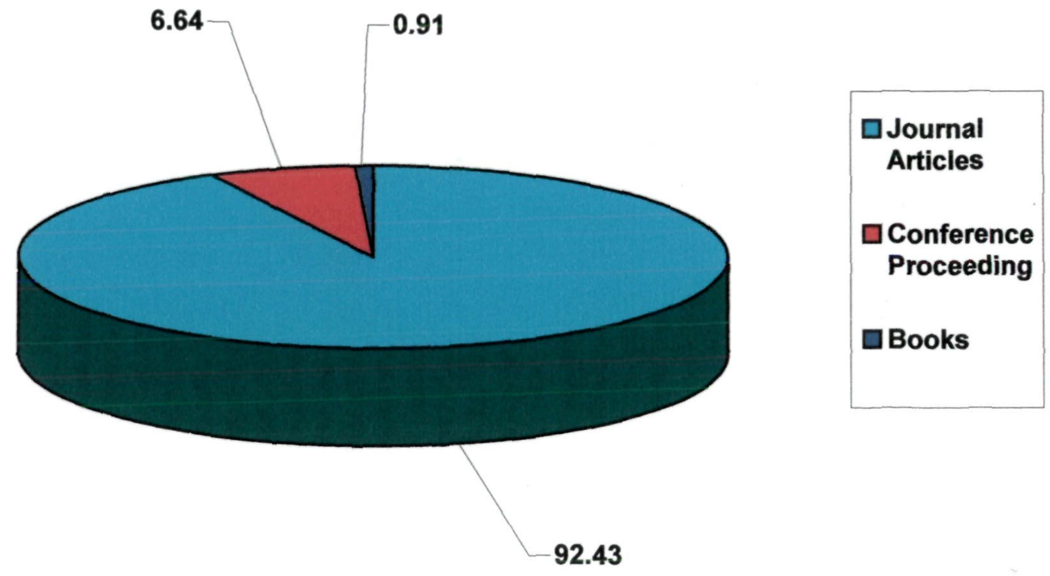
Another major issue is the **timing** of the Mergers and Acquisitions (M&A's). The acquiring company has to decide as to what is the optimum time of striking a deal which can maximise value for him. A major factor affecting the timing of the deal is the level of competition too. These days companies are cash rich and a large number of modes of financing are available. Hence, there are large numbers of potential bidders as compared to the number of targets[4]. The global and domestic economic scenario may have a huge impact in pre and post merger decisions. The year 2007 saw a global slump with major economies going for a beating. An acquisition at that time may benefit the acquiring the company as the valuations might be low while the acquired company if making losses might get a lease of life. In the above case studies we see that the merger of ICCL-IMFA in 2005, IISCO-SAIL in 2006, Bellary

Pittsburgh in 2006, Tata NatSteel in 2005, Tata-Corus in 2007, Essar-Algoma Steel in 2006 and JSW-SISCOL in 2008 took place when the global economy was in financial dsitress. The global recession struck the worldwide economies in September 2007 which resulted in a huge slump of demand of steel and hence had an impact on the post merger results. Thus there was an impact irrespective of the financial and operating efficiencies. Other micro and macro environmental factors like political instability, rupee appreciation or depression, boom or slackened demand etc may affect the performance of the merged entities.

Apart from considering various parameters regarding the process of Mergers and Acquisitions (M&A's), a major concern relates to **the financing of the scheme.** Restructuring involves a significant amount of money and hence added responsibility. In the recent years it has been observed that the value of the deals is much larger than before and though companies may be cash rich there might be still shortage of funds to pay for the deal. With the deal value running into millions companies resort to debt financing and a large number of banks are willing to aid in financing the deal on the basis of the financial capability of the company involved. However the debt raising may have a financial burden on the company as long as it is not repaid. In case of deals where the acquiring price is paid through share swapping it puts serious doubts in the minds of the existing investors as it dilutes their stake and ownership. In the case of Corus acquisition Tata went for a debt equity mix where debt was around US$ 6.14 billion and equity amounted to US$ 7.56 billion. It was an all cash deal[5].

Decision on finalizing the **cost of deal** is a very pertinent issue for both the acquiring and acquired firm as calculating the synergies that are expected to be created after the merger has taken place is a tricky issue. Tata Steel had to estimate the anticipated synergies before paying huge amounts of acquisition that is S$468.10 million for NatSteel[6] and $12.1 billion for Corus[7]. Essar had paid 1.85 billion CAD in cash for acquiring Algoma Steel in Canada. Financing is a major issue in Mergers and Acquisitions (M&A's) and when the money runs into millions and billions the management has to make sure that it gets all its strategies in place as a failure might dent the financial resources and capability for years. In cases where the deal involves share swapping and does not wholly deal in cash it is a tricky issue to determine the exchange ratio. In case of JSW and SISCOL merger it was set at 1 share of JSW for 22 shares of SISCOL while in case of IMFA and ICCR it was 1 share of IMFA for 14 shares of ICCR as discussed under the Chapter 6. Also giving away shares leads to dilution in the stake of the existing shareholders and also the infusion of new owners

Diagram: 10 Form-wise distribution:



operating capacity which could be exploited for achieving synergies. Pittsburgh Iron and Steel which was earlier SandY Mills Limited dealt with textiles and decided to enter the business of steel. It decided to purchase Bellary Steels but it was already a loss making enterprise and the merger did not yield much benefit or synergies. In the case of merger of IMFA with ICCR there were significant operational synergies which made the former the largest producer of Ferro-alloys. Tata's acquisition of NatSteel and Corus made it the fifth largest producer in world and access to global markets. In the same way Algoma Steel's acquisition gave Essar Steel access to the North American market.

Another issue in financing a deal is the **change in debt structure** after the merger has been affected. In case of payment in cash it leads to large cash outflows. Cash payments are generally made by taking loan and it leads to leveraging of the capital structure and making the financial structure risky with the debt burden. In cases where equity is issued it leads to dilution of stake and hence again a risk is involved. Table 10.3.1 highlights that the proportion in Debt after the merger increased in the capital structure of SAIL (after the merger with Visvesvaraya), JSW (after the merger with SISCOL), IMFA (after the merger with ICCR), NatSteel (acquired by Tata Steel), Tata Steel (acquired NatSteel) and Algoma Steel (acquired by Essar Steel). It declined for SAIL (after merger with IISCO), Pittsburgh (after merger with Bellary Steel) and for Essar Steel (after acquiring Algoma Steel)

Table 10.3.1: Change in Debt Equity Ratio

Company	Debt Equity Ratio (DER) before the merger	Debt Equity Ratio (DER) after the merger
SAIL(Merger with Visvesvaraya)	2.36	3.05
SAIL (merger with IISCO)	0.58	0.35
JSW(Merger with SISCOL)	0.75	0.98
Bellary(Merger with Pittsburgh)	-9.98	-7.14
Pittsburgh (Merger with Pittsburgh)	-85.31	0.24
IMFA(Merger with ICCR)	1.53	5.17
NatSteel (Acquired by Tata Steel)	0.03	0.07
Tata Steel (Acquired NatSteel)	0.75	0.39
Tata Steel (Acquired Corus)	0.26	0.68
Algoma Steel (Acquired by Essar Steel)	0.009	1.29
Essar Steel (Acquired Algoma Steel)	1.99	1.55

Source: Compiled and Calculated from Tables 8.26, 8.2.7, 8.3.6, 8.3.7, 8.4.7, 8.4.8, 8.5.3, 8.5.4, 8.5.10, 8.5.11, 8.6.8, 8.6.9, 9.2.3, 9.2.4, 9.2.10, 9.2.11, 9.3.7, 9.3.8, 9.4.3, 9.4.4, 9.4.8, 9.4.9

Another important repercussion of the Mergers and Acquisitions (M&A's) is seen on the **movement of the market price of the shares** and how well the merger goes with the investors. The SAIL-IISCO merger in 2005-06 saw the MPS rise by 31.75 percent in 2006 while by 36.15 percent in 2007. For JSW Steel the MPS increased by 66 percent in the year following the merger while it fell by -71.70 percent in 2009 but it was greatly affected by the recessionary forces worldwide. Bellary Steel saw its MPS fell by -90.83 percent immediately after the merger in 2007. In case of NatSteel while the MPS had declined by -50.67 percent in the year prior to the merger it jumped by 136.11 and 70.59 percent after the merger in the next two years. After the NatSteel merger the market responded positively with the MPS increasing by 56.81 percent and 33.80 percent in 2005 and 2007 respectively. However the Tata-Corus deal which was regarded as expensive and ambitious led to a fall in MPS by -16.18 percent the following year.

Table 10.3.2: Change in MPS of Companies after the Merger

Company	MPS for Year before the Merger	MPS for Year after the Merger	Percentage Change (%)
SAIL (Merger with IISCO)	63	83	31.75
JSW(Merger with SISCOL)	493.45	819.1	66
Bellary Steel (Merger with Pittsburgh)	6.87	0.63	-90.83
NatSteel (Deal with Tata Steel)	0.36	0.85	136.11
Tata Steel (Deal with NatSteel)	225.96	354.32	56.81
Tata Steel (Acquired Corus)	474.07	397.36	-16.18

Source: Compiled and Calculated from Appendix 5, Appendix 10, Appendix 12, Appendix 20 and Appendix 22

Also the **size of the target and acquirer company should match** each other for the purpose of integration. Acquiring a larger company involves greater complexities and smaller ones might not get the requisite attention. Corus was much larger than Tata but that did not deter the spirit of Tata Steel. In other cases taken up in this thesis it is seen that the merged company was the subsidiary of the merging entity and post merger the merging company attempted to achieve economies of scale.

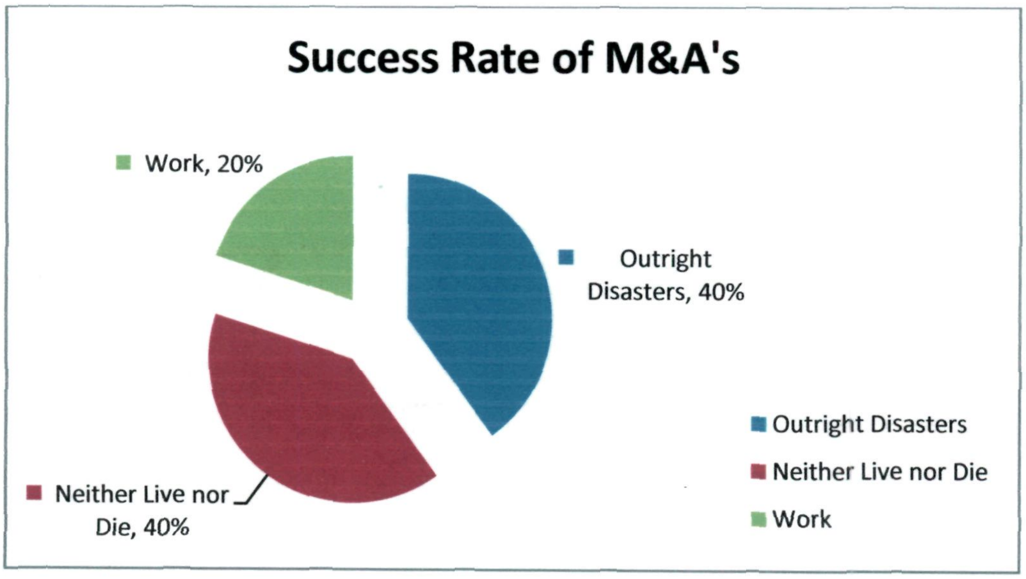
A major issue faced in the merger is the **integration of accounting standards and practises** followed by the merging units. They might be following different policies and post-merger difficulties may be faced in preparing consolidated accounting and financial statements. For example the financial year ending may be different; treatment of expensing etc might not be the same. Algoma Steel maintained its accounts with financial year ending in December but after the merger in order to integrate its accounts with Essar Steel it had to change the financial year ending to March. In case of foreign acquisitions the amounts and figures would be expressed in different currencies and suitable conversion rate would have to be decided for the same. While the figures of NatSteel were in Singapore Dollars, those of Corus were in UK Pounds while that of Algoma were in Canadian Dollars. It is important to ensure that a proper audit is done of the accounts of the acquired or merged firm to avoid discrepancy. It is also a challenge to prepare a consolidated statement of accounts of the two merging entities after the merger has taken place in order to absorb all the assets and liabilities. Different accounting principles might be followed for valuation of fixed assets, depreciation and other heads and the accountants have to devise a system to integrate them.

Mergers and Acquisitions (M&A's) would also require **cultural integration** of the two units. In case of cross border deals, it is even a bigger challenge due to varying work culture, work environment, management styles, government policies etc. It is also generally seen that initially there is resistance by the workers for the new management team to handle. Both operating and cultural integration may pose serious hurdles for implementing the merger. The employees of the acquired company may have to face a large number of changes in the work environment which may bring about resistance. It was seen in the case of Daimler-Chrysler merger which was viewed with great expectations as a merger between equals and expected to bring huge returns for both in the form of various synergies but on the contrary it led to fall in profitability and lay-offs mainly due to non-compatibility in the cultural environment. Daimler being German and Chrysler being American had different work cultures which could not be synced effectively.[8] Though the intent might be there it is still an issue to actually implement it. Cultural values are intangible and cannot be measured or calculated. Even asking the employees directly through a questionnaire cannot be exhaustive information for developing strategies for the same as work culture is observed and studied through a period of time to study disciplines, conditions, beliefs and other cultural traits. It requires dedication and patience and results might take a fair amount of time to reflect. After acquiring Corus, Tata Steel chose to retain key members of Corus to ease the transition due to the existent difference in culture. Cultural integration is an issue in domestic Mergers and Acquisitions (M&A's) as well as different states in India might have different local languages and customs taking into account the diversity of Indian culture.

Another pivotal factor which is faced in the case of Mergers and Acquisitions (M&A's) relates to integration of **socio-cultural issues** which has not been studied extensively yet and the work done is mostly confined to theoretical aspects[9]. It has to be planned keeping in mind whether the main focus is immediate short-term integration or long term planning.

The biggest problem involving a Mergers and Acquisitions (M&A's) is the complexity of its nature where **integration of two different undertakings** is required with an aim to make them functional as a single unit. It encompasses all the departments though it might be done to achieve certain specific advantages like technical, financial or human resource etc. Another aspect that must be kept in mind is that post-merger integration may involve additional costs and hence the acquirer should be prepared for it while calculating the expected returns. The cost would depend on the existing level of integration and cultural compatibility, nature of deal, nature of business etc. In the case of Pittsburgh which earlier dealt with textiles and made a deal with Bellary Steels to enter the business of steelmaking, huge restructuring was required. which did go down very well with the financial results.

Figure 10.3.1: Success Rate of Mergers and Acquisitions (M&A's)



Source: Stress Points Along the Mergers, Acquisitions and Integration (MAI) Journey, Osti & Associates, New York, 2003. Retrieved from http://www.ostiassociates.com/stressspoints.pdf

Figure 10.3.1 reflects the views of Peter Drucker who considers Mergers and Acquisitions (M&A's) unsuccessful. However the most vital issue was implementation of the objectives of Mergers and Acquisitions (M&A's) which is a highly complex and complicated affair. Putting all the plans, policies and strategies into practice and deriving the expected synergies is the major concern. Often it happens that the implementation of the Mergers and Acquisitions (M&A's) being a tedious and complex issue consumes a large amount of time and issue like innovativeness, integration, optimization fail to get the deserved attention. For the success of a Mergers and Acquisitions (M&A's) it is necessary to ensure positive integration of all the departments and units. It might be so that there is effective integration in some aspects while others are not able to produce the desired effects which might have a disintegrating effect on the merged unit.

It is a difficult task in **developing a team for the purpose of post-merger integration**. It poses numerous challenges in the form of selection of members, assigning them with responsibility, monitor their performance, provide incentives and get feedback. The team has to focus on all issues relating to integration of various facilities and it may also be necessary to provide sufficient training to the members for the same. It is often seen that the focus of the team is dedicated towards operations relating to finance and productions and issues like cultural integration are overlooked. Necessary training needs to be imparted to the employees relating to this aspect and sufficient finance and focus have to be allotted for such intercultural training programmes. At the very inception of the idea to merge, the issue relating to cultural synergy need to be recognized while evaluating the target company. Strategies to tackle with it shall also be developed at the initial stages to counter the resistance faced later to smoothen and iron out the cultural differences. It may be advisable to retain key members of management of the merged entity as was done by Tata in the case of Corus acquisition.

At the rate the Mergers and Acquisitions (M&A's) and acquisitions are growing both in the domestic and international arena; it calls for introspection on their viability and feasibility. It is necessary to **examine the post-merger effect on the company** and also the profitability and performance of the company. It is generally seen that there are movements in the market price around the merge announcements but these are generally based on anticipation and not actual productivity and performance. The shareholders also watch these Mergers and Acquisitions (M&A's) and acquisitions with caution. While undertaking a deal, companies have to ensure that they have resources not only in terms of finance but also the ability to cope up with the global regulatory and economic framework, multiculturalism etc. It applies mostly to the mid-cap companies indulging in global acquisitions having limited exposure and experience on this front. Also it is most difficult to actually measure the synergies or benefits accruing from the merger. In the first few years the benefits or drawbacks of the merger or acquisition might not be visible as was seen in the case of acquisition of NatSteel and Corus by Tata and acquisition of Algoma Steel by Essar Steel.

The **future of the merged enterprise** to a large extent depends on the expected synergies and also the performance of the acquired unit. Financial obligations increase as a result of the merger which is expected to be cleared with the expected increase in revenues and production capacity. However it might lead to a huge financial and operational issue if the expectations do not materialise and this is the case in all kinds of mergers and acquisitions undertaken.

Haste in decision making is another major issue leading to issues later. It is often seen that the desire to put in place all plans and expecting immediate results leads to problems later. The pressure to affect a successful merger may lead to **over-focus on financial issue** and issue like operational, cultural, technological sync may be overlooked which might have repercussions in the longer run. The synchronization with the merged or acquired company may take time and has to be dealt with tact and vision in order to exploit the expected synergies. The focus should not be in making financial profits. In the mergers and acquisitions studies it is seen that in some cases it is the operational performance while in others it is the financial performance which is getting a boost as a result of the deal. Table 10.3.3 shows that the Profit Margin registered a greater increased in case of SAIL (merger with IISCO), IMFA (merger with ICCL), Pittsburgh (acquisition of Bellary), JSW Steel (acquired SISCOL), NatSteel (acquired by Tata Steel), Algoma Steel (acquired by Essar Steel) and Essar Steel (acquisition of Algoma Steel). On the other hand the Profit Rate increased by a greater margin for SAIL (merger with VISL), Tata Steel (acquisition of NatSteel, Tata Steel (acquisition of Corus)

Table 10.3.3: Change in Profit Margin and Profit Rate after the Merger

Company	Percentage Change after the merger on Profit Margin (Financial)	Percentage Change after the merger on Profit Rate (Operational)
SAIL (merger with VISL)	3.92	70.37
SAIL (merger with IISCO)	1505.96	189.21
IMFA (merger with ICCL)	120	66.67
Bellary (acquired by Pittsburgh)	-32.36	-72.94
Pittsburgh (acquisition of Bellary)	103.54	99
JSW Steel (acquired SISCOL)	635	74.6
NatSteel (acquired by Tata Steel)	111.77	59.09
Tata Steel (acquisition of NatSteel)	158.54	491.67
Tata Steel (acquisition of Corus)	77.5	252.54
Algoma Steel (acquired by Essar Steel)	127.94	-25.23
Essar Steel (acquisition of Algoma Steel)	700	316.36

Source : Compiled and Calculated from Tables 8.2.10, 8.3.11, 8.4.11, 8.5.14, 8.6.13, 9.2.15, 9.3.12, 9.4.12

A Mergers and Acquisitions (M&A's) is generally undertaken with the objective of realization of synergies. However **calculation of synergies** is a critical factor. It has to be ensured that it is neither overvalued nor undervalued. An undervalued synergy may lead to underutilization of resources and facilities while an overvalued synergy may lead to integration and management problems. At the time of calculation of the value of the deal to be paid, anticipated synergies are one of the core issues determining the valuation of the company to be acquired. It is often seen that these synergies are exaggerated and before the management realises it causes financial losses. In case of foreign acquisitions the synergies are expected to be created from economies of scale and operations. Besides India being rich in iron reserves provides the foreign counterpart with cheaper access to raw materials and the Indian companies get access to foreign markets and advanced technologies of production. India is known for being low cost producers and accessing foreign technologies might not let companies like Tata and Essar Steel retain that position. Their iron ore reserves may also deplete earlier due to excess production. Hence the synergies of scale may in the longer run cause adverse effects as well. Another problem that is faced is **different set of metrics and parameters** used by companies for valuation of performance and efficiency. Also the different accounting systems followed is a major concern. The

accounting, financial human resource strategies might be different for different companies and it might prove difficult to develop and initiate a common model. Continuing with the model of the acquirer or acquired company may not always prove fruitful for the merged entity as it might not serve the needs in the changed circumstances. The parameters might be different in terms of units, weight, length or other dimensions and the employees might not smoothly adapt the change to a new measuring system.

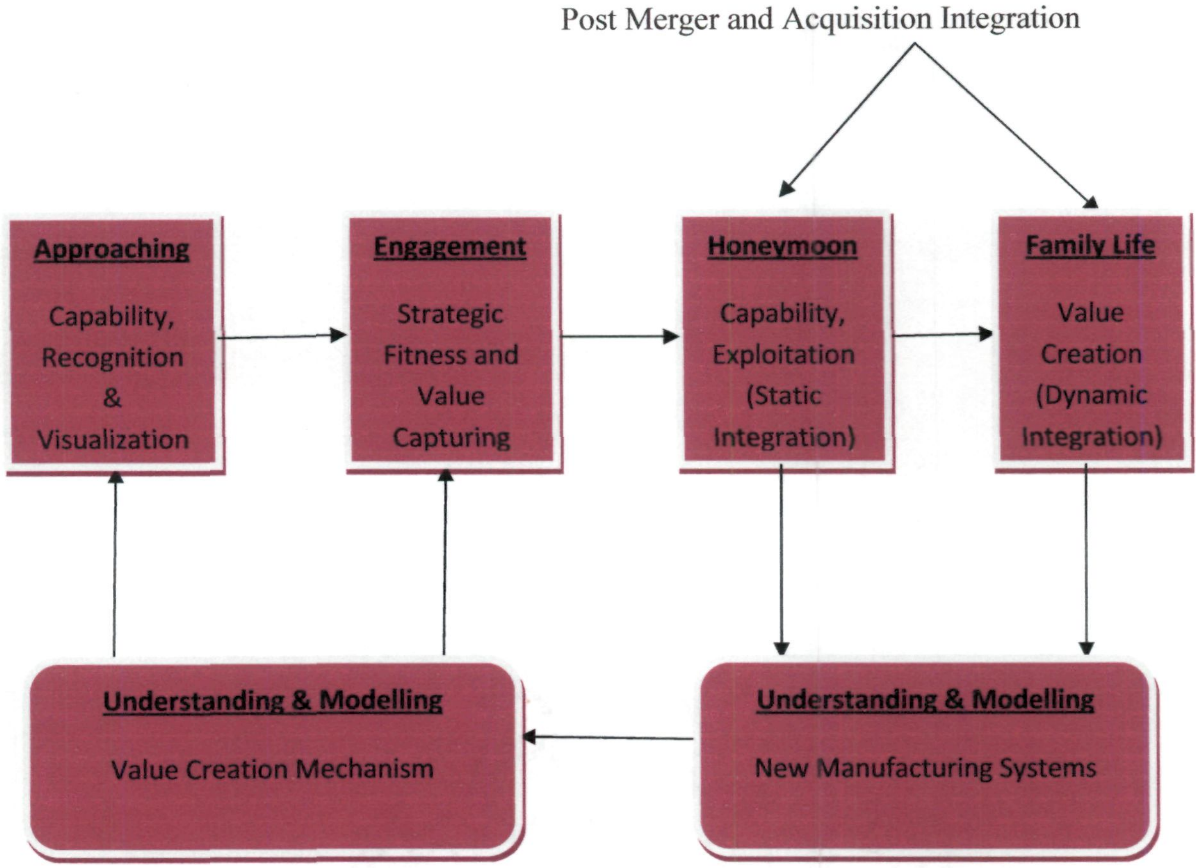
Cross border Mergers and Acquisitions (M&A's) are increasing both in number and relevance and face greater challenges not only due to the different economic environment but also the **regulatory environment**. The policies and rules followed by different countries are different. Some may encourage such kind of foreign alliances while some may have a host of restrictions imposed. Even in India, doors were opened only after liberalization measure undertaken n 1991 but still there are restrictions on FDI and FII in certain sectors like retail. While undertaking an acquisition in Thailand or Europe, the norms of not only the home country but also that of the country where the proposed investment had to be made were required to be deeply studied by Tata Steel. Similarly Algoma Steel's acquisition required Essar Steel to do a study of the Canadian regulations.

Even in case of domestic deals it might be that different **states have different tax rates** applicable and these have to be kept in mind while making an inter-state acquisition so that the requirements of the states involved is satisfied. Post-merger it might be a daunting task for the management to garner the **confidence of the existing customers** and ensure them of the maintenance of the quality services that they were getting before the merger with the added incentive of benefitting from post-merger integration. For this purpose it is necessary to ensure that there are positive vibes about the merged entity in the market as a negative media impact may compound the problems at hand gravely. The acquiring firm might get that done by convincing reputed analysts about the expected synergistic gains and values from the merger. Also the suppliers and supply chain management has to be apprised of the change in management and have to be taken in confidence so as to avoid glitches in supplies of inputs for ensuring smooth production process. Also the fusion of technology of the acquired and acquirer firm is before the merger explored only on theoretical basis and there might be various issues and challenges while practically implementing them. When huge established companies like Tata Steel and Essar Steel make acquisitions it adds to the prestige of the company but in case of huge acquisitions as was in the case of Corus it puts question marks on the expected financial and operating synergies. Also in case of government backed companies like SAIL which have undertook mergers with its loss making subsidiaries it is perceived as an opportunity to expand the operating capacity. The existing customers have faith in the capability of SAIL to absorb the new undertakings in its fold. The backing of the government is an added advantage.

10.4 Strategies and Implications for Dealing with the Problems

The news of a prospective Mergers and Acquisitions (M&A's) gathers a lot of attention but the fact remains that most of these fail to deliver the anticipated synergies with a large number of factors not falling in sync or the fears of the employees of the acquired company regarding their future being not addressed to duly.Figure 10.4.1 highlights the process undertaken for the purpose of fostering post-merger integration. At the initial stages which are depicted in the model as 'Approaching' the main focus is towards identification and detailed study about the target company. The strengths and weaknesses of the target are studied intricately with the objective of recognizing its capability. At this stage the main objective is formulating a vision as in the latter stages there will be efforts to bring into operation the vision which is envisaged at this stage. There are attempts to bring out strategic integration of various units and hence create value under the next stage depicted as 'Engagement' in the model. This process is depicted in the model as "Understanding and Modelling: Value Creation Mechanisms". This stage is followed by Post Merger and Acquisition Integration. The first step is termed as 'Honeymoon' which involves static integration. This process involves exploring the various facets and units. The capabilities and facilities of both the units are integrated. It involves integration of the functional and operational processes. The last stage is termed as 'Family life' which refers to value creation. While the previous stage constitutes static integration, this involves dynamic integration. The whole process is termed in the model as "Understanding and Modelling: New Manufacturing Systems". An appropriate feedback system is also required to be developed through which the shortcomings are identified and corrective action is taken at the value creation mechanism.

Figure 10.4.1: Strategy for Post-Merger Integration



Source: Pursuing Cross-Border Merger and Acquisition Synergies, Institute for Manufacturing, University of Cambridge, Retrieved from http://www.ifm.eng.cam.ac.uk/cim/projects/archive/integration.html (2003)

It is imperative to ensure that the merger undertaken is not lopsided and **synergies are evaluated in the right earnest objectively.** It is extremely important to ensure that an optimum balance is ensured in all areas that are financial, technological, operational, managerial and cultural. The success of merger to a large extent would depend on the **degree of balance** that is created. A major deviation is warranted in the thought process where not only quantitative but also qualitative aspects have to be introspected in utmost detail for evaluating the feasibility of undertaking a Mergers and Acquisitions (M&A's). while undertaking foreign acquisitions the main idea for Tata Steel and Essar Steel is to benefit from the technological competence of its European and Canadian counterparts and provide low cost of labour and raw materials. While India has a developing market with enormous untapped potential the foreign markets have an established customer base where profit margins are high.

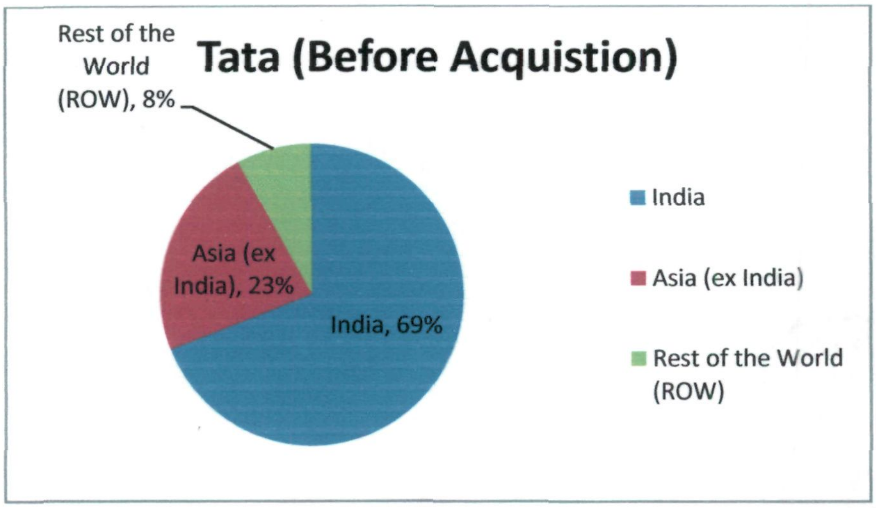
Even in the domestic Mergers and Acquisitions (M&A's) a similar balance is attempted where companies try to capitalize on skills by SAIL, IMFA and JSW Steel. A major attraction with Mergers and Acquisitions (M&A's) especially the ones associated with foreign countries is **the entry into new markets** which enables the undertaking to get a hold and expand its operations in foreign territories and gain a share in the world market. The major reason behind the Mergers and Acquisitions (M&A's) strategy of Tata Steel can be attributed towards this motive and strategy where it initially acquired the Singapore based NatSteel in 2005 and the Anglo-Dutch steel company Corus Steel. In 2005 Tata Steel had acquired Millennium Steel of Thailand. The acquisitions in 2005 gave Tata Steel a strong presence in the Asian market and an additional customer base of two million tons of steel. The acquisition of Corus in 2007 made it the second largest in Europe and the fifth largest in world. The highlight of the Corus acquisition was the fact that Corus was making four times more than Tata and yet Tata acquired it after a fierce rival bidding. The spread of markets for Tata and Corus before and after the merger is discussed in Table 10.4.1. Tata was initially dominant just in India with a share of 69 percent while in Asia it was 23 percent while that for the rest of the world was low at 8 percent. For Corus the market was primarily concentrated in Europe with a market share of 49 percent in Europe, 29 percent in UK, 10 percent in North America, 9 percent in Asia and 3 percent in ROW. The figures after the acquisition show how both the entities benefitted from each other's market presence. Tata got entry in the European market while Corus got an entry into the Asian market and both together were expected to benefit from mutual synergies. The share in Europe of the merged entity was 37 percent, in Asia it was 24 percent, in UK it was 22 percent. In North America it was 8 percent while that for the rest of the world stood at 9 percent. Hence the base of the merged entity was more diversified than it was individually and both the companies could benefit from each other's presence.

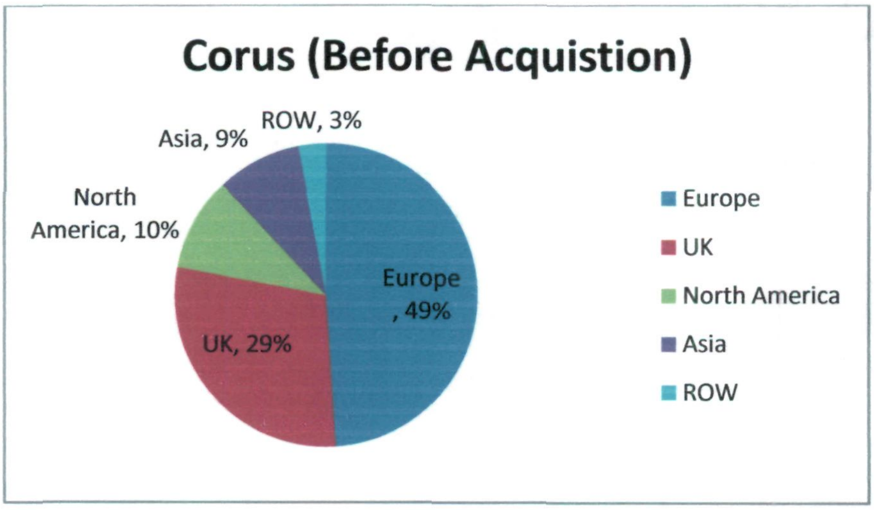
Table 10.4.1: Spread of Markets before and after the Acquisition

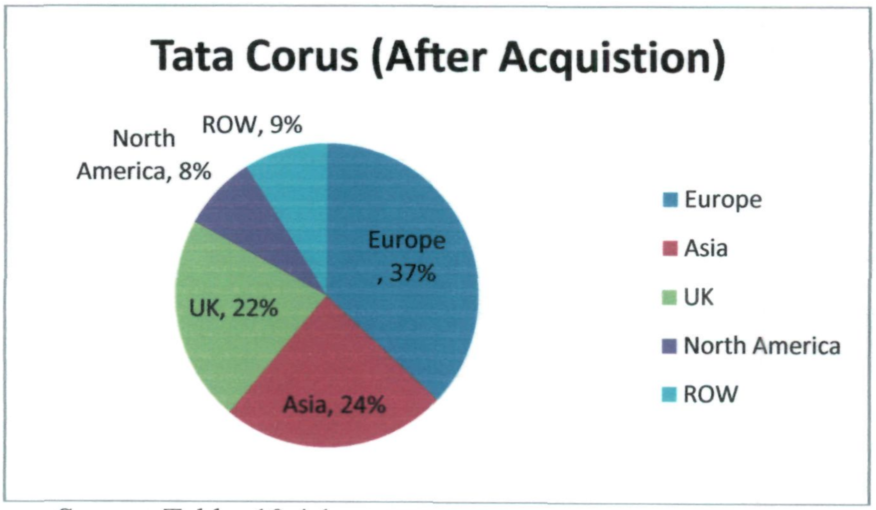
Before the Acquisition				**After the Acquisition**	
Tata		**Corus**		**Tata Corus**	
India	69%	Europe	49%	Europe	37%
Asia (ex India)	23%	UK	29%	Asia	24%
Rest of the World (ROW)	8%	North America	10%	UK	22%
		Asia	9%	North America	8%
		ROW	3%	ROW	9%

Source: Tata Steel Annual Report 2006-07. Retrieved from http://www.tatasteel.com/investors/tatasteelAR2006-07/index.html

Figure 10.4.2: Spread of Markets before and after the Acquisition (for acquisition of Corus by Tata)







Source: Table: 10.4.1

For the purpose of selection of the target company a deep and **detailed study of the target company** has to be done most intricately on the basis of financial and production statistics. Also the market performance, position, credit worthiness, future prospects would enable a company to zero in the target company which meet the needs and also decide a suitable price for the proposed deal. An original research would be required to be done dealing with all relevant aspects of the targets business relating to market share, products, customers base, production, creditors, future potential, financial position, technological competence etc. The strengths and weaknesses of the target have to be assessed in detail. While merging loss making subsidiaries SAIL had to assess the impact of their losses on its financial statements and also the benefit of greater economies of scale to be accrued. In its bid for expansion and creating greater operating capacity Indian Metals and Ferro Alloys (IMFA) took over Indian Chrome Charge Limited (ICCR) and so did JSW for SISCOL. However all didn't go well with the Bellary and Pittsburgh iron and Steels deal. In case of international acquisitions too, the benefit and the complexities associated with the target had to be deeply studied in order to deal with the situation in future.

At the same time it is often seen that big companies acquire or merge **companies which are running into losses**. The decision may be strategic and might prove to be a shot in the arm for both the entities. The loss making company which has the required infrastructure gets the necessary technological, financial and managerial influx. On the other hand, the acquiring company gets a unit at comparatively low valuation and if the latter was incurring losses, it can write them off against its profits and reduce tax liability. The Board for Industrial and Financial Reconstruction (BIFR) in India looks over this aspect. The merger of SAIL and Visvesvarya is an example of this. A loss making subsidiary was merged with the parent company. The merger of IISCO with SAIL was also on similar lines where the pre-merger profitability of IISCO had a negatively correlated relation with the post merger profitability of SAIL. Table 10.4.2 gives a synoptic view of the pre and post merger Profit Rate and Profit margin for IISCO and SAIL. The Pre-merger Profit Margin for IISCO is very low at -21.925 while that for SAIL is also negative at -0.012. The Post-Merger Profit Margin is healthy at 0.165 signifying that the post-merger performance is much better as compared to that of the pre-merger. The Profit Rate of IISCO before the merger is -0.1192 while that for SAIL is -0.172. Both are negative and very low. However the

Post Merger Profit Rate of SAIL is a positive 0.153 highlighting again that the Post-Merger operations are much better than the Pre-Merger in terms of the Profit Rate as well.

Table 10.4.2: Calculation of Pre and Post Profit Rate and Profit Margin for Merger between SAIL and IISCO

	Net Sales **Profit Margin= PAT. / NS**		**Total Assets** **Profit Rate= PAT. / TA**	
	Pre-merger Average	**Post-merger Average**	**Pre-merger Average**	**Post-merger Average**
a) IISCO	-21.925	NA	-0.11918	NA
b) SAIL.	-0.01175	0.1652	-0.1715	0.153

Source: Kaur, Kuldeep and Kushwinder, Kaur, "Growth and Profitability of Acquiring Firms in India", Paper presented at National Conference on Corporate Sector, Industrialization and Economic Development in India, March 27-28, 2009, Institute for Studies in Industrial Development, New Delhi
Source: Compiled and Calculated from Table 8.3.11 and Appendix 4

It might also be advisable for the companies undertaking Mergers and Acquisitions (M&A's) to **study related mergers in the same industry** in the past to develop an understanding of the issue, problems and strategies to be developed for undertaking a new alliance. In the steel industry the trend of consolidation has been growing very strongly and keeping up with the global trend the industries in India have been taking a plunge. The merger of Arcelor with Mittal in 2006 created the largest steel company in the world for which they paid 40.37 Euros per share[10]. It was followed by acquisition of Corus by Tata which made it the fifth largest producer in the world. These acquisitions and mergers are necessary to meet and sustain the competition as a merger entity is in a better position to meet the challenge.

In case of large projects it is advisable to enter into a Mergers and Acquisitions (M&A's) for the purpose of **diversifying the risk among the partners** and also ensure complementary technological expertise especially in the case of industries relating to developing of projects involving building of aircraft, arms, computers, steel where the costs runs into billions of dollars.[11]

It is essential **to plan perfectly in order to structure and execute any business strategy**. Taking into account the nature and complexity of carving out a Mergers and Acquisitions (M&A's) deal, it is extremely vital to set out the goals, targets and achievements most clearly and precisely. Instead of making a long list of goals and targets it is necessary to make a phased list where the goals and targets to be achieved are identified in the order of priority. The long term and short-term goals should be set out for effecting a smooth transition. It would be simpler to set targets in a realistic manner as over exaggeration may lead to difficulty and eventually failure in execution of plans and policies. Also the set plans and targets have to be communicated to the concerned employees to ensure that the vision, goal and target is well understood by all which would be effective in achieving post-merger integration. The most difficult task is to set the targets according to priority. The foremost priority is to achieve integration and in the latter years benefit from the operating and financial synergy.

It is extremely necessary to make **realistic and achievable targets in terms of synergies** as well. It may be so that the excess estimation of operating synergy may lead to lags in quality. Realisation of cost synergies through cutting cost may lead to closure of a vital unit or linkage which hampers the operation and performance, and it may be so that the technical synergies might not be compatible. Hence the management has to ensure that maintenance of value is not sacrificed for the sake of realization of synergies. After the Corus deal it was stipulated that Tata would not remain the lowest cost producer of Steel in the world as this advantage was hugely because of its access to raw materials and reserves but the excess burden on the resources due to increase in capacity from 5.3 million tonnes to 27 million tonnes will drain the resources much earlier and adversely affect the cost advantage in the longer run as Corus had access to specialised facilities but not natural resources[12].

Stringent control has to be exercised over the operations and employees. For the different modes of performance measurement indicators in terms of finance, accounts, human resources etc, it might be advisable to **develop a new model taking into account the needs and ground realities.** The accounting policies should be so designed that it suits the needs of the new undertaking; HRM policies should be accepted and approved by the employees to avoid resistance and friction; research and development issues should be dealt with in the light of the changing environment and needs; marketing policies have to be carved keeping in mind the brand value, old customers and the image to be created in the minds of the customers. Hence it is not always advisable to stick to the old protocols followed by the acquired or the acquiring firm and a new working environment might be required to be created in the dynamic and changing environment. It might also prove effective if there has been a pre-merger agreement on the enforcement of new metrics and protocols after the merger or takeover has been affected. At the same time it is important to give time to the plans and strategies to give results. Mergers and Acquisitions (M&A's) is a highly complicated and complex affair and the results might not be instantly felt. The integration is a long term process and there should be periodic review of the plans and strategies but they should be given a reasonable amount of time to reflect in performance and results. The maximum importance ought to be given to the integration aspect.

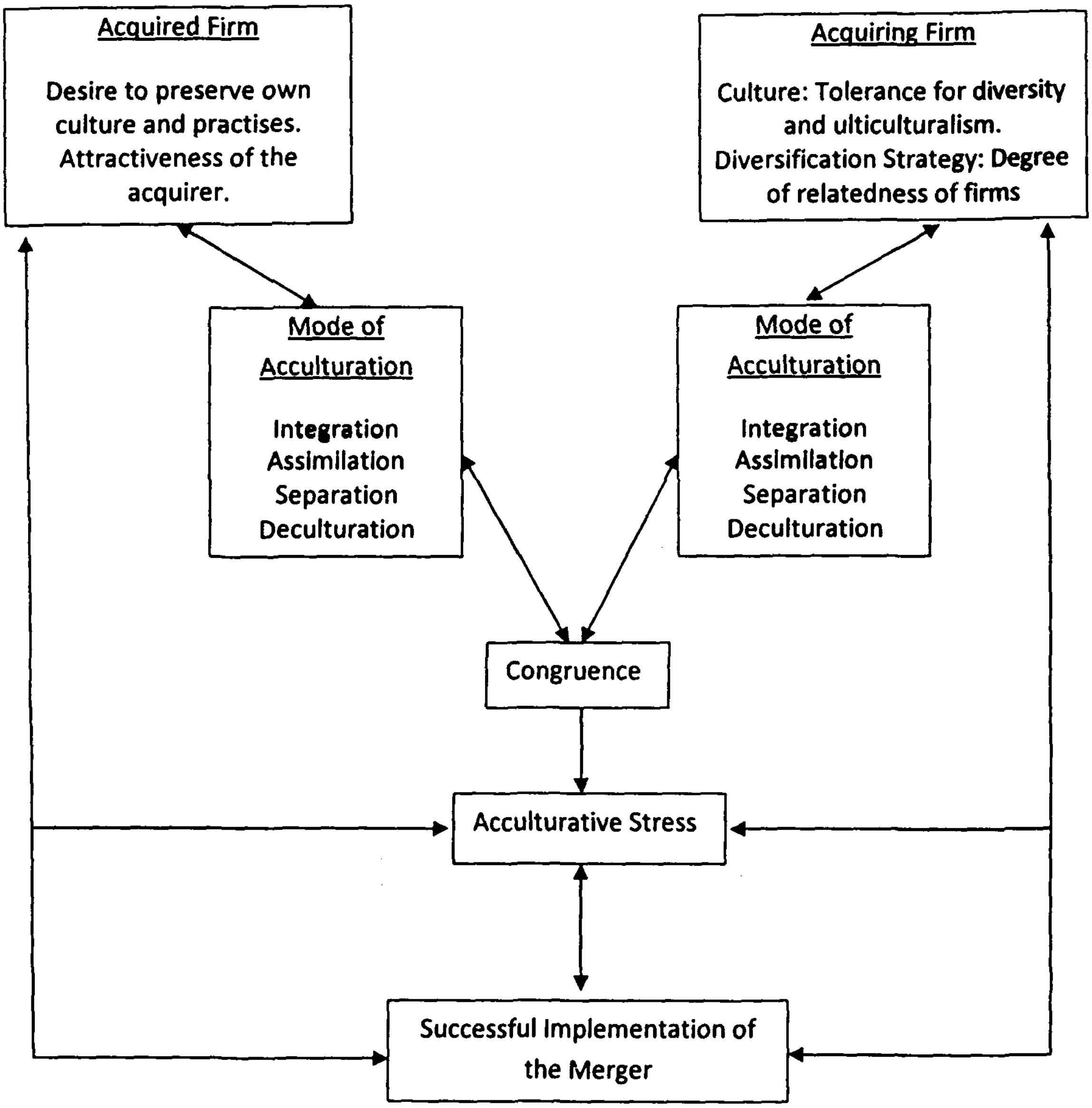
In the case of cross border acquisitions we see that generally the acquiring company retain key members of the acquired entity as in the case of Tata Steel and Essar Steel. It might be a good option to **develop a team** with the task of bringing about integration of various units post-merger. The team may include members from various units who may be offered incentives as well. A mechanism should be developed to provide coordination and address all issues at conflicts arising from the integration immediately. It should be assured that the people are the given the maximum emphasis in terms of creating value. Adequate training should be given to the employees and staff for the purpose of letting them develops proficiency in intercultural synergy mechanism and competence. They also encourage formation of teams and committees to overlook the process as was done by Tata Steel of which Ratan Tata was himself the Chairman[13]

The acquiring company has also to study and estimate the **potential cost of the merger** and also evaluate its resources as to whether it can afford the merger. It so happens in many cases that merger are undertaken which are ambitious and failure to meet the associated costs makes a hole in the acquirers pocket to such an extent that operations of the parent company are also negatively affected by it for a long period. The cost does not only involve the financial aspects but there are other related issues as well. It might be so that the parent company would have to put on hold some of its present projects or those it intended to undertake in the near future due to the merger or acquisition undertaken. Hence there would be an opportunity cost involved and that should also be counted as a notable aspect while undertaking a merger. In case of financially sound companies like SAIL, JSW steel, Essar Steel and Tata Steel also, the spate of Mergers and Acquisitions (M&A's) was observed with caution by the investors. It led to a fall in the market price due to the doubt whether it would be able to recover from the huge financial outflow.

In order to bring about cohesion of socio-economic factors acculturation has to be developed smoothly in order to bring about congruence in operations. Figure 10.4.3 gives an insight in the mode adopted for cultural integration of the units involved in the merger. The acquired firm faces a new management at the helm but it prefers to maintain its work culture and offers resistance. The firm that is acquiring has to ensure that while implementing its management and administration styles, due recognition is given to the culture of the acquired firm and the diversification is done keeping in mind the relatedness of the two firms involved. The acquiring and acquired firms both have to bring about integration, assimilation, separation and deculturation. The process would lead to congruence of the two individual management styles and culture leading to acculturative stress and eventually bring about successful implementation of the merger.

Figure 10.4.3 **emphasizes people and** it is necessary to recognize the value of human resource as a lubricant for effecting a smooth merger. Employees may resist a merger and there might also be various apprehensions and it is necessary to address their concerns and provide them the necessary security and assurance for creating an efficiently performing merged unit. Cultural cohesion should be accorded the same level of priority and importance as operating, production and financial synergy as it is an all pervasive function and deals with all the department and levels .It is required in dealing with the day to day affairs and business. For the purpose of avoiding conflicts and disputes and creating a mechanism of understanding and communication, integration of cultures is of paramount importance. The management should keep in mind that the success of operational and financial synergy depends on the human factor which is the intangible factor involved. It is the management's job to bring about a conjoint leadership mechanism of the two entities that integrates of cultures and also ensure that there is retention of quality talent and skills. Research suggests that the lack of intercultural understanding accounts for 65 percent of failed mergers. In the event of a mismatch of the cultural process it leads to a communication gap leading to a negative impact on the production and operations.[14]

Figure 10.4.3: Acculturative Model for the Implementation of Mergers



Source: Nahavandi, Afsaneh and Malekzadeh Ali R. (1988), " Acculturation in Mergers and Acquisitions", The Academy of Management Review, Vol. 13, No. 1, (Jan., 1988), pp. 79-90

Apart from fostering cultural integration another issue at hand is **employee's retention.** At the time of restructuring depending on the policies formulated various employees lose their jobs to suit the new vision of the merged and resultant entity. However, it is a daunting task for the management to ensure that quality talent is not lost in the purpose. There will be certain key members who have to be retained due to their knowledge about the operations and functions of enterprise, relationships with customers, effective leadership, etc. The management has to ensure that it identifies and retains the key talent which would go a long way in making the merged entity's performance improve and excel. While undertaking an acquisition it might not be always necessary to overtake the management in totality too but it might be a fair idea to retain the top management if it's doing its job well. Tata retained the top management of Corus and retained its CEO in order to facilitate the integration efforts[15].

Mergers and Acquisitions (M&A's) are generally undertaken to fuel the need of growth and expansion but the basic rationale should not be based on **unrealistic ambitions**. It might happen that entrepreneur goes for the deal to satisfy ambitions and for fame though it is not feasible for him on financial and other grounds. Also it may so happen that at times of rival bidding; the company losing the bid finds itself exposed in the market which may have a negative effect to its market value. It is too early to predict whether Tata actually paid excess for Corus but so did Mittal for Arcelor as compared to what they offered initially. The company's believed that they can recover from the synergies to be created and taking into account the present financial scenario the scene looks positive for creation of huge steel empires.

For the purpose **of calculating the cost or the premium** to be paid for the deal the synergistic value and the net present value should be calculated in the most realistic terms possible.

For the purpose of meeting the cost of the restructuring it might be an option to consider **leveraging**. Employment of debt capital has various advantages. It not only increases the availability of funds but reduces the tax liability as well as interest payable is taxed as an expense. The debt employed is loaned capital and hence comes the responsibility of being repaid. Hence there is extra caution in its use and cost control measures are employed even more diligently. Timely repayment of debt determines the credit worthiness and creation of value by the firm. These factors should also be given consideration while exercising the option of injecting debt capital. However the general trend is to employ a mix of debt, equity and cash financing.

A decision of Mergers and Acquisitions (M&A's) involves a **large number of people** and organizations besides the two entities coming together. It might be a good option to apprise all the elated parties about the facts and ground realities relating to the merging agreement. Though the final decision and intricate details would rest with the management but it might prove beneficial to hear the concerns of the investors, creditors, suppliers, bankers, employees, major customers and other parties concerned.

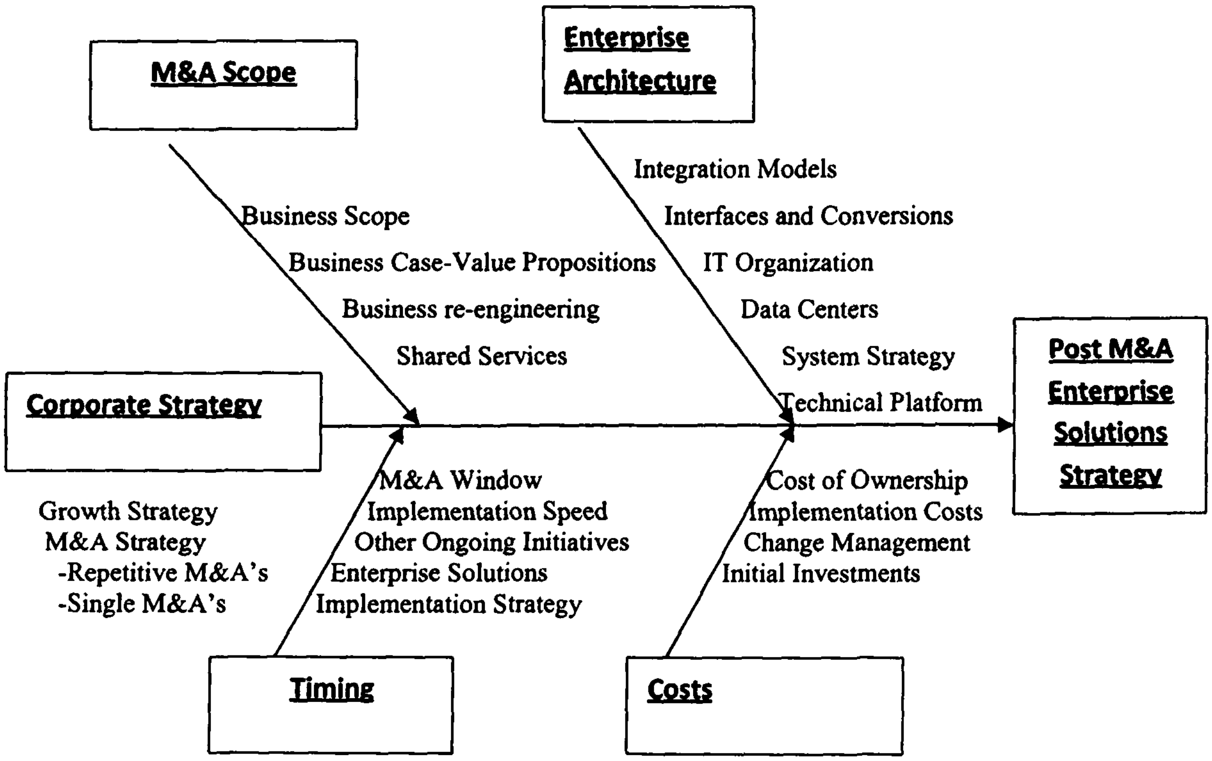
There are certain issues specific to different countries and the acquiring company has to make related adjustments. In case of domestic deals also the policies and practices followed should to be given due consideration. **Labour laws** in India are one such aspect. An acquiring or merging entity has to undertake the employee's liabilities relating to pensions, provident funds, medical etc. It may be required to bring about certain modifications in the same and all may not go well with the employees. Hence these should be dealt with most tactfully in order to ensure that the employee's interest and concerns are not harmed at any point of time. **Forming unions** is a common practice in India and it often leads to disturbance to the working environment in the form of strikes and lock outs. In the recent years there has been some improvement in the scenario with the increase in the level of competition and entry of MNC's in Indian market but still the issue is of considerable importance and should be dealt with utmost care.

Another major problem faced in India is the **diverse culture**. As per the 2001 Census of India 29 languages are spoken by more than one million native speakers, and 122 by more than 10,000[16]. The huge cultural diversity poses a major challenging in bringing about integration among two units which are belonging to different areas. The problem might be more compounded in case of cross border mergers.

Besides empowering and enabling the management to take strategic decisions, the present recession has highlighted the need to have a **risk management mechanism**. Integration involves various complex issue which might face various hurdles and difficulties. However there might be a major issue involving a micro or macro factor leading the whole process to be severely affected. In such cases it might be advisable to have a team of professionals dealing with risk management in such situations involving unforeseen circumstances.

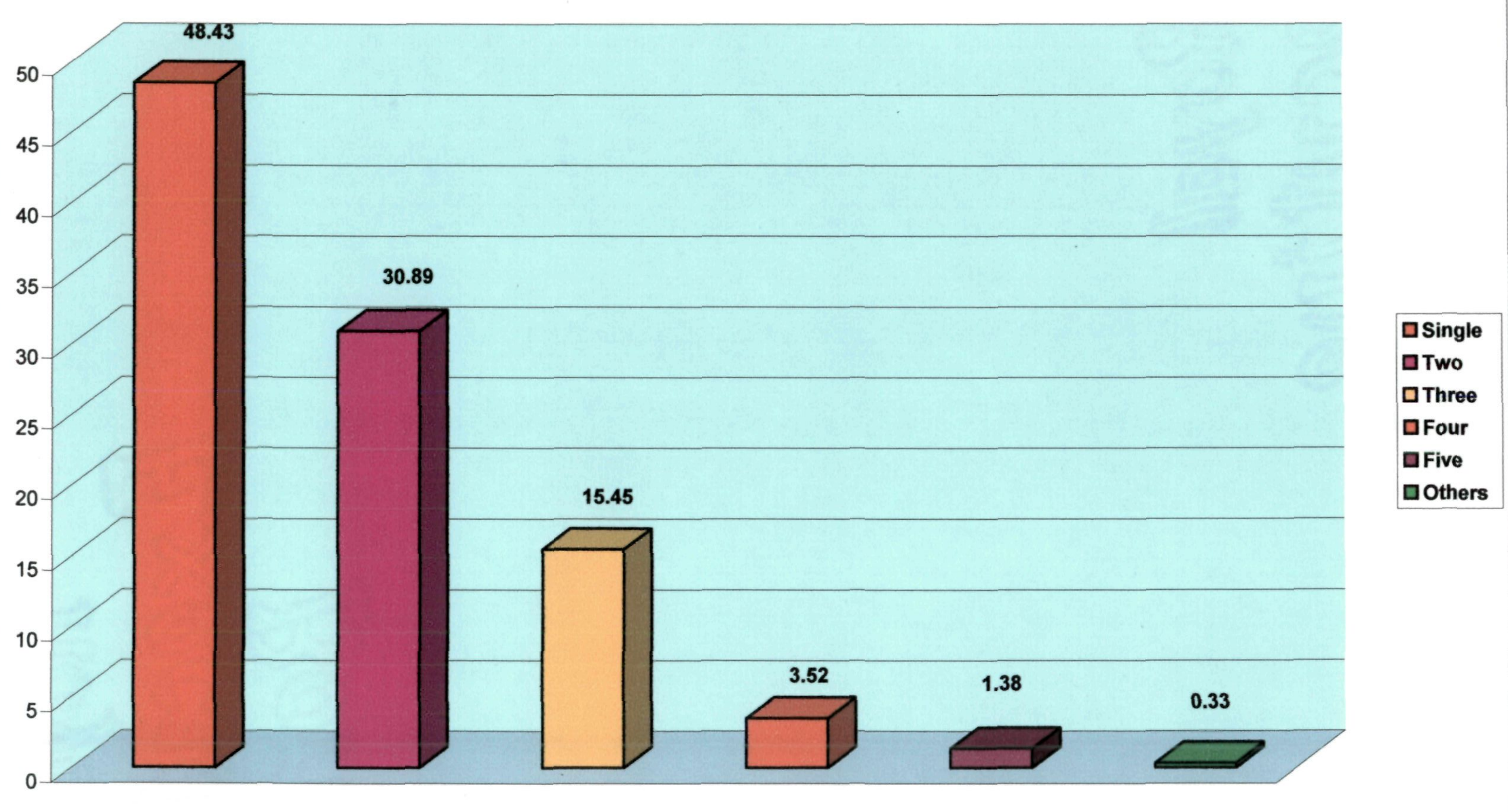
Figure 10.4.4 illustrates a model to bring about Post-Merger integration of units. Mergers and Acquisitions (M&A's) might be a growth which is done through either repetitive or a single deal. The reason or **scope** for the deal may vary across various options. It may be done with a view of expanding business options and opportunities or increasing the value of the business. It is sometimes done for restructuring and re-engineering the businesses. It might be done for the purpose of sharing services too. Another relevant aspect is **timing.** It is very important to determine the pace at which implementation is planned to b effected. The other available modes, options and **initiatives are also explored.** It is also to be determined that in what pattern the enterprise solutions have to be integrated and what will be the time factor for implementing them. The long and short term implementation strategies have also to be worked out. Another aspect highlighted in the model relates to the **enterprise architecture.** For the purpose of bringing about integration, various models would be required to be designed and worked out. Various interfaces would be required between the employees and there would be certain conversions required to merge the units functioning. The architectural change would involve IT department and data centres also as information and data bases would have to be integrated as well. The system strategy would have be brought together on identical technical platforms. The next aspect depicted in the model relates to **cost.** The foremost element relates to the cost of acquiring or ownership followed by those related to implementation. The change in the managerial staff would also entail certain cost along with the initial investment. All these constitute the Post-Mergers and Acquisitions (M&A's) Enterprise Solutions Strategy.

Figure 10.4.4: Post Merger Enterprise Solutions Integration Decision Model



Source: Gauthier, Eric M, "Outlook Point of View, Ideas that Create the Future" November 2001 Accenture Analysis. Retrieved from http://www.manda-institute.org/docs/m&a/accenture_08_post-merger%20and%20acquisitions%20integration%20an%20enterprise%20solutions%20environment.pdf

Diagram-11: Single Vs Multiple Authorship pattern



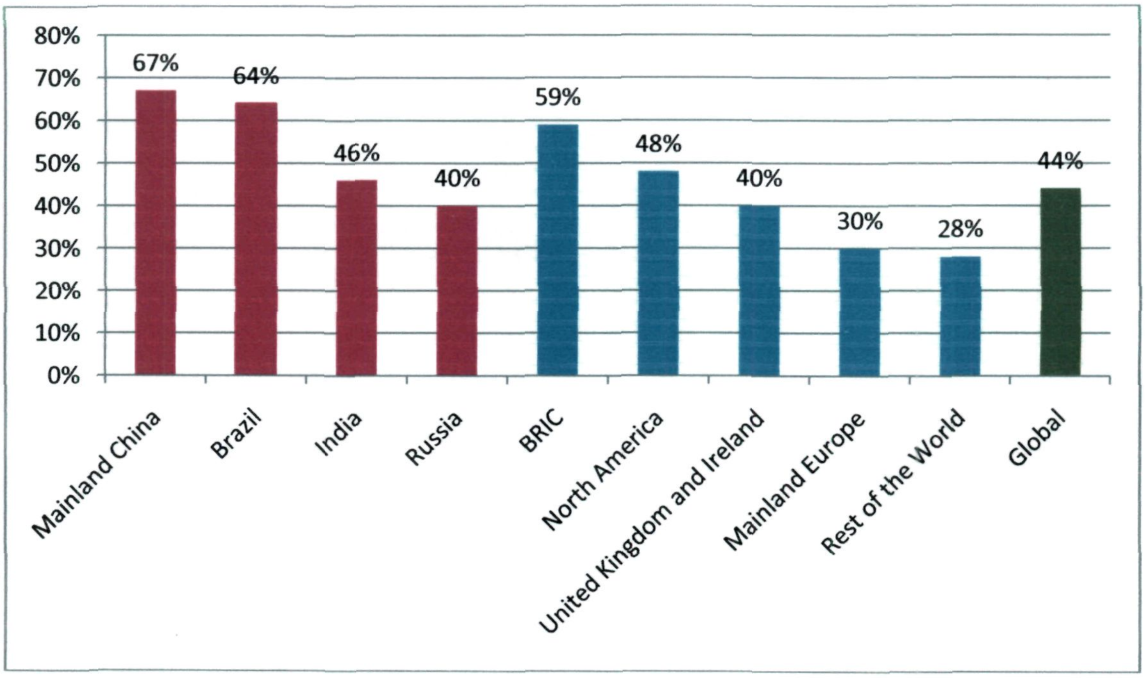
The recession had a serious impact on the business of the exporters and the firms seeking targets for expansions in the west. It led to a situation where strategies and policies had to be redrawn. It focused on the need to look for customers and opportunities beyond the west. The present crisis disturbed the financial and economic values of a large number of firms and it requires a new and innovative approach for the purpose of valuations of firms for the purpose of undertaking Mergers and Acquisitions (M&A's) in the wake of the present recessionary trend of the economies which had led a to significant fall in the value of assets and other strategic investments.

However in the globalized arena it might be noted that the combining of two units is no longer confined to statistical and accounting figures but it is the human aspect which is emerging to be one of the key features determining the success or failure of a merger or acquisition. The **cohesion of cultural values** and work culture is looming to be a vital factor.

Mergers and Acquisitions (M&A's) create **opportunities in terms of growth, development and job creation** and in the present era globalization is the key word where an isolated economy has limited future. The governments of states have also to realize the need for the hour and bring about flexibility in laws and policies accordingly. Agreements in the field of investment, labour, technology, labour etc have become a necessity rather than an option. Hence corporate restructuring at the national and international level is now a mode of survival, growth, expansion and development. It is imperative to understand that different industries are faced by different issues and Mergers and Acquisitions (M&A's) being a complicated issue cannot be evaluated just on the basis of averages. A case by case approach has to be adopted for which a sophisticated perspective and not a generalized approach is mandatory.While striking a deal it is not only sufficient to evaluate the present timing for the purpose of deciding if it's appropriate but also the **future ahead in terms of opportunities** involving growth, competition, environment, research and development etc.

In Figure 10.5.1, the emerging economies owing to their increased importance are grouped under one head that is Brazil, Russia, India and China (BRIC). Mergers and Acquisitions (M&A's) is a tool for both ambitious expansion and exploiting opportunities in emerging markets. Figure 10.5.1 laments the present scenario where acquisition is no longer a domain in the hand of the entrepreneurs of the developed countries. The percentage of respondents from BRIC countries was the highest regarding willingness to undertake an acquisition. It is no longer an area which attracts investment but is making a stronghold in the sphere of undertaking global Mergers and Acquisitions (M&A's). The next in the list is North America at 48 percent which has a history of undertaking acquisitions. It is followed by UK and Ireland at 40 percent and Mainland Europe at 30 percent. The percentage for the Rest of the world stands at 28 percent while the Global percentage is at 44 percent. Hence the estimated percentage for BRIC nations at 59 percent is way ahead of its counterparts highlighting the expected pattern for future growth of Mergers and Acquisitions (M&A's) which are expected to be concentrated in these developing BRIC nations. Individual analysis of the BRIC nations reveals that China leads the pack at 67 percent followed by Brazil at 64 percent. India is lagging behind at 46 percent and Russia at 40 percent. Post-liberalization India has made an amazing process making it one of the most promising economies. It is using the tool of Mergers and Acquisitions (M&A's) for acquiring competence, technological skills, exposure and growth but still it is lagging behind considerable as compared to China and Brazil.

Figure 10.5.1: Percentage of Respondents planning to grow through Acquisition in the next three years (Average)



Source: "Mergers and acquisitions: Opportunities for global growth"Grant Thornton, International Business Report 2008 Retrieved from http://www.grantthornton.com.mk/Publications/Mergersacquisition.htm

10.6 Conclusion

The analysis in the above paragraphs provides a detailed discussion about the various problems that are faced during Mergers and Acquisitions (M&A's). A study about qualitative aspects especially the **socio economic factors** reveal that is emerging as a major factor for the high failure rate of mergers. It suggests that operational and financial aspects are not enough to assess and evaluate a merger. The problems are discussed in the light of Mergers and Acquisitions (M&A's) in general and the case studies taken up for discussion in particular. It is seen that the developing economies are making significant deals and the upward trend is expected to increase at a faster rate in the future as well. The trend of consolidation and restructuring seem to be the order of the day where striking a deal with the big players in the business has become a recipe for survival and success. The strategies suggested are particularly directed towards the problems which have been identified by the Researcher. The future prospects relating to Mergers and Acquisitions (M&A's) are also discussed briefly on the basis of various introspections, surveys and trends analysed in the thesis. The succeeding chapter is the final chapter of the thesis and it sums up the work done by the Researcher in the form of a brief summary followed by the findings and limitations of the study.

10.7 References

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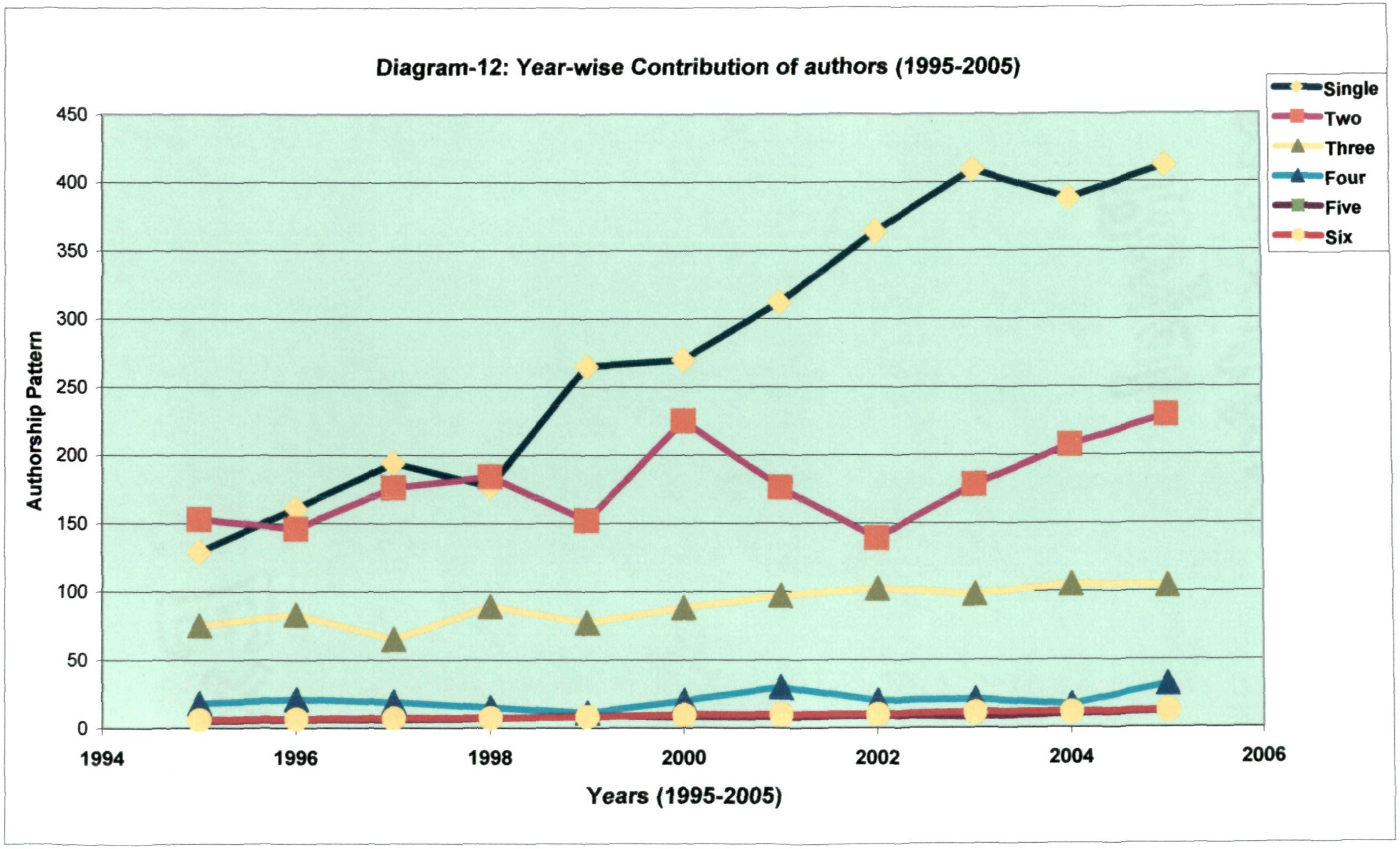


Diagram-12: Year-wise Contribution of authors (1995-2005)
Authorship Pattern
450
400
350
300
250
200
150
100
50
0
1994
1996
1998
2000
2002
2004
2006
Years (1995-2005)
Single
Two
Three
Four
Five
Six

Chapter 11

Summary and Findings

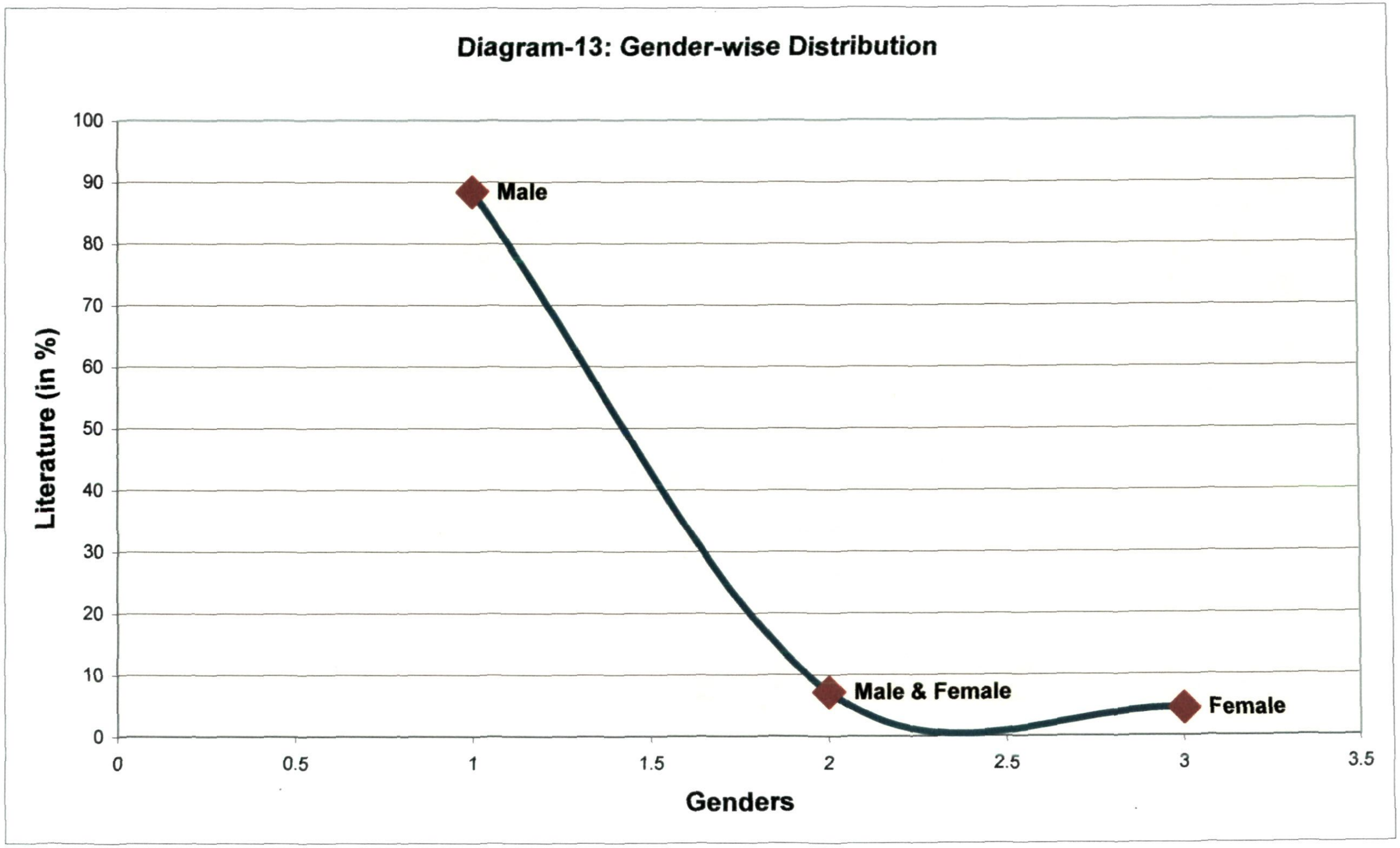


Diagram-13: Gender-wise Distribution
Literature (in %)
100
90
80
70
60
50
40
30
20
10
0
0
0.5
1
1.5
2
2.5
3
3.5
Genders
Male
Male & Female
Female

prospects related to these countries are examined in order to understand the future trend of Mergers and Acquisitions (M&A's) in various countries.

The Indian economy in its liberalised form is studied and it is traced as to how it developed and grew as an economic powerhouse after it was freed from the clutches of regulation in 1991 when the New Economic Policy was unveiled. The utility and importance of the study arise due to the host of benefits arising from the spate of Mergers and Acquisitions (M&A's). it has become a strategic tool for growth for various reasons which are creation of synergies, access into foreign markets, surviving competition, diversification, availing tax concessions etc. the Indian economy has come a long way from the time when Mergers and Acquisitions (M&A's) were restricted to big business houses and regions.

The Indian market is an attractive destination to invest mainly due to the availability of large amount of raw materials, natural resources, low cost skilled labour, untapped market potential. Also the Indian corporate sector is eyeing and finalizing major domestic and cross border deals. The development of banking and finance sector is proving to be a big shot on the arm with the facility of huge amount of deals being financed easily. The growth of Indian economy can be gauged by its position in the FDI confidence Index. It stands third in the world at 1.64 behind USA at second position at 1.67 and China at first position at 1.93.

The growth in Mergers and Acquisitions (M&A's) in India has been steady and stable with the purchase in 1991 at US$ 1 million to US$ 1877 million in 2008 and sales from US$ 35 million in 1992 to US$ 2977 million in 2007. The study also provides details of the major companies and the number of Mergers and Acquisitions (M&A's) made by them in the last few years where Hindalco Industries leads the pack. The largest ever acquisition in a foreign country was however made by Tata Steel when it acquired Corus for US$ 12.2 billion. The study provides a detailed account of sector-wise Mergers and Acquisitions (M&A's) deals in India citing the year, name of acquired and acquiring company along with value of the deal structured. Also deals done by major companies like WIPRO, Accenture and Tata group are dealt with separately.

The year 2007 witnessed one of the biggest financial crisis in the history of the world economy with stocks and valuations at an all time low due to the liquidity crisis which erupted in USA. The study highlights its impact on the level of Mergers and

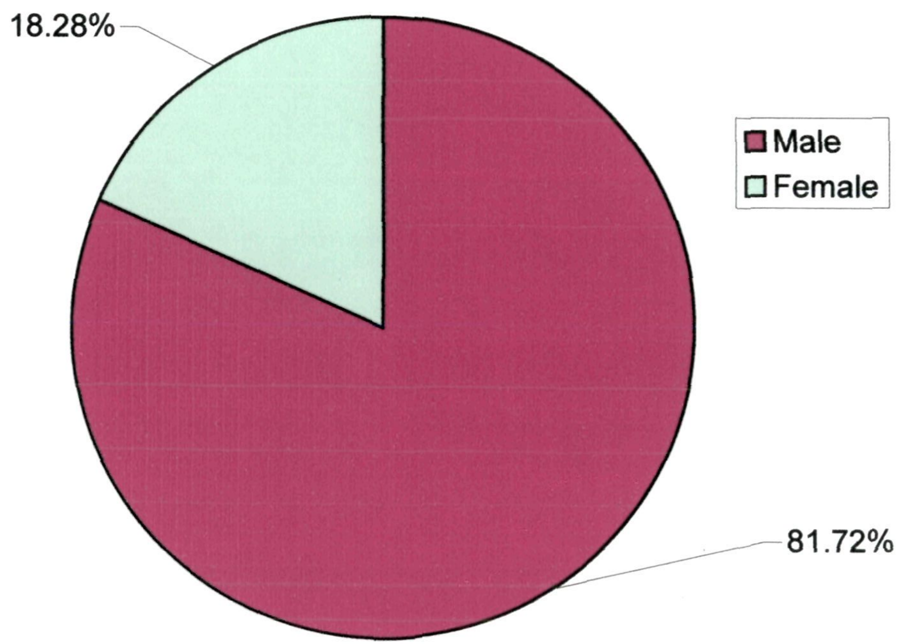
Acquisitions (M&A's) in India where the number of deals fell by -41.19 percent and the value by -67.59 percent in 2009.

The global economic environment and its impact on the direction and volume of Mergers and Acquisitions (M&A's) is dealt with separately where it is seen that earlier it was USA which was leading the pack in terms of Mergers and Acquisitions (M&A's) but now it is facing stern competition from the developed economies. The growth in the number and value of deals since 1991 is discussed at length. The various motives behind Mergers and Acquisitions (M&A's) are also discussed which range from factors related to regulation, technology, economic, strategic and geographical. The study gives a detailed account of various merger and acquisition deals that have taken place in various sectors across the world in terms of year, name of acquiring and acquired company and the value of the deal. It is seen that the pharmaceutical and technology sector seemed to be involved in maximum number of Mergers and Acquisitions (M&A's) transactions. After the recession many deals were witnessed in the financial sector in order to survive in the market. the global recession made a significant impact on the volume and value of deals which saw a sharp fall. In terms of volume deals fell by -18.15 percent and in terms of value by -33.29 percent in the year 2008. However there are certain sectors which seemed to be unaffected which were pharmaceuticals, transport and construction. In terms of future the BRIC countries are expected to lead the Mergers and Acquisitions (M&A's) brigade with a maximum 59 percent of respondents planning to undertake a Mergers and Acquisitions (M&A's) deal.

The recent spate of increased Mergers and Acquisitions (M&A's) is particulary due to the opening of the economy with the introduction of the New Economic policy of 1991. Though the measures were taken under emergency situation with the balance of payment crisis it has greatly worked in favour of the Indian economy which is projected as the next big thing on the economic platform alongside China. The legal framework prevalent in India regarding Mergers and Acquisitions (M&A's) is discussed under various relevant Acts which are listed below:

1. Companies Act, 1956
2. Substantial Acquisition Of Shares And Takeover Regulation, 1997
3. The Competition Act, 2002
4. The Foreign Exchange Management Act, 1999
5. Securities Contracts (Regulation) Act, 1956

Diagram-14: Academic Staff in the Jordanian University (2005-2006)



the merger or acquisition on the pre and post merger analysis. The ratios so calculated are tested to analyse the hypotheses that have been formed. The Researcher uses correlation coefficient (r) to determine the direction and degree of relation, coefficient of determination (r2) to explain the variation in terms of percentage, regression equations to find ten cause and effect relation. Finally the student t-test is done for testing the statistical significance. These tests are applied not only for the ratio analysis but also to test the effect of the merger on the pre and post merger EPS and MPS. The relation between the profitability and MPS is also calculated to find out the effect of the announcement of the merger and the financial performance of the merging and merged firms to study the long term effect on the market price. In the end Profit Rate and Profit Margin are calculated to find out the financial and operating efficiencies of the firms involved before and after the merger and relevant percentages are calculated to make a comparison of the same.

Before applying the research methodology so designed the Researcher gives a brief overview of the Indian Steel Industry and traces its growth and development since liberalization when the New Economic Policy was announced in 1991. The removal of restrictions and regulations has greatly facilitates its growth and development over the years and today it stands among the top ten steel industries of the world. The growth in production, consumption and imports and exports over the year can be traced through the figures provided by the Joint Planning Committee and provided by the Ministry of Steel, Government of India. The steady growth over the years is evident by the figures and the growth percentages calculated. The impact of the recession on the steel industry which caused a slump in demand and corresponding fall in demand and production is also shown. The development as pushed the Indian Steel Industry to the fifth position in the world according to the 2009-2101 Annual Report prepared by the Ministry of Steel, Government of India. the acquisition of Corus has made Tata Steel the eighth largest producer of steel in the world in the year 2008. The steady profitability of the Indian Steel Industry in recent times is also shown by the Researcher where the profitability for the year 2009 is registered at 7.02 percent. The DER, CR, ICR are also satisfactory at 1.03, 1.23 and 3.47 respectively.

The study also provides a detailed study of the major Mergers and Acquisitions (M&A's) deals that have taken place in India since 1991. The volumes of the deals have grown at a phenomenal rate in the last twenty years. Also the trend of an Indian company making a foreign deal has been hitting headlines. The deal where Tata acquired Corus for approximately US$12.2 billion is the largest ever by an Indian corporate. Other steel companies like Jindal, JSW and Essar Steel are also making significant progress in this direction. In the public sector SAIL has been amalgamating companies with itself and boosting its operating capacity in the process.

The pre-merger analysis of Visvesvarya does not have a great picture of the financial condition of Visvesvaraya Iron and Steel Limited (VISL). There was a consistent fall in the PAT, RONW and ROCE for Visvesvaraya Iron and Steel Limited from 1994-98. The hypothesis testing shows that the profitability and CETR of Visvesvaraya had a limited impact on the post merger financials of SAIL. Visvesvaraya was a loss making unit and its merger with its parent company gave it a new lease of life. The merger made it possible for SAIL to write off its losses and get deductions on tax payments. The dismal state of affairs led to a proposal of its being taken over by the Defence Ministry as 60 percent of its products that is alloy steel were required by it. The proposal however did not materialise and its association with SAIL continued. It was in November 2004 that VISL started making profits and since then it has been a profitable concern for SAIL.

The analysis of SAIL as regards merger with Visvesvaraya shows that the profitability declines after the merger but it was due to the recession in the global and domestic steel industry. A restructuring plan was devise to bring about a turnaround in order to separate its non-core business from its main business of production and sale of steel. The Testing of Hypothesis for various financial parameters reveals that the relation between the Pre and Post merger Profitability, CETR and ICR is statistically insignificant. Only when six years of Pre merger is compared to eleven years of post merger of CETR, the relation is significant. Hence the testing of Hypothesis supports the notion that the merger did not have much impact on the financials of SAIL. The relation between the Post merger Profitability and MPS is however significant. The MPS is greatly affected by Profitability and other factors. The study of the Profit Rate and Profit Margin also highlights the limited impact of the merger on the financial performance and greater effect on the operational performance.

In case of IISCO's merger with SAIL the Hypothesis relating to the Pre merger Profitability and CETR of IISCO with the post merger statistics of SAIL shows that the both the relations are statistically insignificant. IISCO was running into losses prior to the merger and consequently had a negative impact on the profitability of

SAIL while the CETR had a positive impact on the CETR of SAIL. The correlation was of low degree but it should be kept in mind that the setting off of losses may have reduced profitability but at the same time the tax liability as well.

When we see the merger from the perspective of SAIL we see that SAIL was making profits since 2004 and the trend continued after the merger as well. However the testing of Hypothesis shows that it's only the relation between the Pre and Post merger ICR which is statistically significant. However the degree of correlation is low. The relation between the Pre and Post merger Profitability and ICR is statistically insignificant. The Pre merger analysis of Profitability and MPS depicts that the relation between the two parameters is statistically insignificant. However post merger the relation is statistically significant and there is a high degree of positive correlation. The hypothesis testing the Pre and Post merger MPS and EPS shows that there is an effect of the merger on the two variables. For MPS the relation is moderate while for EPS it is of a low degree. It is interesting in the light that the Pre merger profitability did not have a statistically significant relation with the post merger profitability. The analysis of Profit Margin and Profit Rate show significant improvement in the financial and operating efficiency.

Hence the merger did not positively affect the financials of SAIL but there were benefits in terms of greater size and production capabilities.

For the acquisition of SISCOL by JSW, the analysis of SISCOL reveals that the losses were converted into losses with the help of core competencies of JSW and after profitability was being achieved the two undertakings were subsequently merged in 2008. The Hypothesis testing reveals that the pre merger Profitability and ICR of SISCOL did not have an impact on the post merger Profitability and ICR of SISCOL. The post merger ICR of JSW had a relation with the pre merger ICR of SISCOL when five years of pre merger and three years of post merger were undertaken. However the study of the Pre merger EPS of SISCOL and Post merger EPS of JSW Steel appear to have a relation revealing that the shareholders were affected. The degree of correlation is a high degree of positive correlation. Thus we see that the association with JSW Steel had converted a loss making unit into a profitable venture.

After running into losses for years JSW Steel finally made a turnaround in its operations in 2004 and started making profits on a consistent basis. There is no relation between the Pre and Post merger profitability on the basis of the test applied. However the benefits of merger are not expected to accrue in the first few years. The analysis of the relation between the profitability and MPS reveals that the relation between the Pre merger profitability and MPS is insignificant. The relation between the post merger Profitability and MPS is on the contrary found to be significant. The **relation between the Pre merger** EPS and MPS with the post merger EPS and MPS is also found to be significant. The Profit Margin for JSW Steel jumped by 635 percent while the Profit Rate increased by 74.6 percent. The losses incurred prior to 2004 are also responsible for this huge change in Profit Margin.

Bellary Steel's historical performance was dismal with losses being incurred since 2001 and they seemed to just magnify after the merger and increased manifold over time. The study of Hypotheses reveals that the Pre merger Profitability, FATR and ICR did not have a statistically significant relation with the post merger figures. The ICR in the short run was though affected having a high degree of positive correlation. However both in the pre merger and post merger stage there is a statistically significant relation between the Profitability and MPS. Prior to the merger the degree of correlation is low while post merger it is a high degree of positive correlation. The Pre merger MPS and EPS also do not seem to have a relation with the post merger statistic.

The financials for Pittsburgh Iron and Steel Limited was in a bad state with losses being incurred at a consistent basis. The test of Hypothesis reveals that the profitability of Pittsburgh had an impact on the profitability of Bellary while there was no effect on the EPS and FATR. The Profit Margin and Profit Rate for both the entities also did not pose a satisfactory picture. To sum up the merger was not going anywhere and both the units individually as well as jointly were making no headway. The decision of promoters to foray into the business of Steel by merging with Bellary Steel was questionable with the latter suffering from losses.

The pre merger figures of Indian Chrome Charge Limited (ICCL) show that the company was running into losses since 2001 but the volume of losses had considerable come down till 2005. The test of Hypotheses reveals that the Profitability and ICR of ICCL had a relation with the post merger figures of IMFA only in the longer run. The FATR of ICCL had a statistically significant relation with the FATR of IMFA both in the shorter and longer run. The two variables had a very high degree of positive correlation. The positive effect that the merger had on the operational efficiency was obvious. Even the EPS of ICCL had statistically significant relation with that of IMFA both in the short and long run. The degree of correlation was high. The merger seemed to fulfil its objectives of financial and operating synergy.

IMFA was a steady and profitable enterprise with the company managing to earn profits over ten years that is from 2000 to 2009 at a satisfactory rate. The Hypotheses testing reveals that there is a statistically significant relation between the Pre and post merger FATR of IMFA having a moderate degree of positive correlation. The relation between the Pre and Post Profitability, ICR and EPS is statistically insignificant. The Profit Margin after the merger shows an increase of 120 percent while the Profit Rate registered an increase of 66.67. Hence the merger appeared to have accrued financial and operating synergies after the merger.

In case of international Mergers and Acquisitions (M&A's) we see that the financials of NatSteel show that the company was running into profits prior to the merger but after the merger took place in 2005 there was a significant increase in the rate of profits indicating that the sale of its steel division was proving to be profitable for the enterprise. The testing of various Hypotheses shows that the relation between the Pre and Post merger FATR and WCTR is significant while the one between the pre and post merger profitability is insignificant. The testing of Hypothesis to determine the relation between the profitability and MPS before and after the merger is interesting. The relation between the Profitability and MPS prior to the merger is statistically insignificant while the relation between the Profitability and MPS after the merger is statistically significant. In case of EPS the relation between the Pre and post merger figures is insignificant while in case of MPS the pre and post merger data are statistically significant. However there is a negative correlation between the two at -0.57.

The acquiring company Tata Steel earned profits on a steady basis over the last decade. The merger had an impact on the profitability of the entity. The FATR and ICR were however unaffected and were statistically insignificant. The relation between the MPS and Profitability shows that both the variables had a statistically significant relation both before and after the merger. Also the Pre merger MPS and EPS had a relation with the Post merger MPS and EPS respectively. The Profit Margin for both NatSteel and Tata Steel increased significantly. The Profit Margin for Tata Steel increased significantly by 491.67 percent indicating a marked improvement in the operating efficiency.

In the case of Tata- Corus deal, from 2000 to 2003 Corus was registering losses and it was only in 2004 that Corus earned profits. However the rate of profits till 2004 to 2006 was in the range of 2 percent to 5 percent which was not very high. The test of hypothesis shows that the Profitability and FATR prior to the merger had a relation with that of the post merger Profitability and FATR respectively of Tata Steel. While Profitability had a negative correlation the FATR had a positive correlation with the post merger figures. The ICR was affected only in the longer run. Pre merger EPS had a very high degree of positive correlation with the post merger EPS indicating the benefits accrued to the shareholders.

The much hyped acquisition of Corus by Tata Steel reflected that the trend of profitability for Tata Steel continued.teh merger had no effect on the figures of Profitability, FATR or ICR as depicted by the test of Hypothesis. The relation between the Pre and Post merger figures is statistically insignificant. The relation between the MPS and Profitability before and after the merger is most interesting. Prior to the merger MPS and profitability had a statistically significant relation with a high degree of positive correlation. However after the merger there is a high degree of negative correlation indicating that the merger did not go down very well with the shareholders as per the market response. The EPS was affected by the merger only in the longer run. It is further seen that the Profit Margin for Tata Steel increased by 77.5 percent while the operational efficiency got a major boost with the Profit Rate moving up by 252.4 percent

The Profitability of Algoma Steel was impressive before the merger. Though after the merger it dropped, it was back on track in 2009 at 8.53 percent. The testing of hypotheses reveals that FATR was affected as a result of the merger both in the small and long run while the profitability was affected in the small run. The ICR was however not affected.

Despite the huge losses incurred initially in the year 2001 and 2002, Essar Steel recovered and posted profits at a steady rate from 2003 onwards. The test of various hypotheses reveals that the merger did not have an effect on any of the parameters, i.e. Profitability, FATR or ICR. For Algoma Steel the Profit margin increased while the Profit rate fell. For Essar Steel both Profit Margin and Profit Rate increased substantially.

The evaluating of problems relating to Mergers and Acquisitions (M&A's) reveals that the major problems faced related to technological obsolescence, timing of mergers, financing of scheme, cost of deal, competitive bidding, change in the debt structure, MPS, selection and size of target company, integration of accounting standards, cultural integrations, examining post merger effect, synergy calculation, different set of metrics and parameters, regulatory environment etc.

For addressing the problems various strategies are proposed by the Researcher relating to using the Mergers and Acquisitions (M&A's) tool for expanding and entering new markets, maintain balance, evaluating the potential of target company, tax planning, diversifying risk, realistic targets, develop a professional team, emphasis on people, employee retention, premium calculation etc.

From the point of view of future prospects the Researcher feels that this tool has got enormous scope for future deals both in the domestic and international arena. It not only acts as a mode to expand and grow but also offers wide employment opportunities. Also the ongoing recession has led the valuations to fall down. Also keeping in view the growth trajectory of the developing countries we feel that the next wave of Mergers and Acquisitions (M&A's) is going to be dominated by them especially the BRIC countries that is Brazil, Russia, India and China.

11.3 Findings

The trend of Mergers and Acquisitions (M&A's) has greatly benefitted from the opening up of the economy but it is only in the recent years that prominent outbound deals are being done.

The global Mergers and Acquisitions (M&A's) increased in terms of volume from 13 in 1991 to 319 in 2007 while the value increased from US$27 billion in 1991 to US$ 70.4 billion in 2007.

The opening of the economy has certainly gave an impetus to the trend of Mergers and Acquisitions (M&A's) in India but it has been only in the last decade that significant deals are being carved out as is evident from the volume and value of deals depicted in the thesis. Also a major proportion of FDI is contributed by Mergers and Acquisitions (M&A's) deals.

The major objective for Indian corporate for effecting a merger or takeover is related to financial synergies followed by increased operational base and reach to new markets. As per various figures, surveys and projections it is the BRIC countries which are expected to lead their contemporise as regards affecting a merger and acquisition deal. According to the 2010 Confidence Index by A.T Kearney India ranks third in the world behind only China and USA.

The ease in access and relatively cheaper rates of debt financing is facilitating a large number of Mergers and Acquisitions (M&A's) which is a major reason for the increased activity. A major factor which affected the Mergers and Acquisitions (M&A's) activity in the recent times is the global recession of 2007. In India the domestic deals fell by -46.73 percent in volume and cross border by -22.82 percent. Interestingly the value for domestic deals increased by 78.60 percent while for cross border deals it fell by -46.81 percent indicating the interest of the India Corporate Sector towards the domestic economy as a result of the recession. For the world economy the value of the deals fell by -34.71 percent in 2008 and 81.71 percent in 2009. The developing economy suffered the highest fall in deals due to recession by -96.72 percent.

For the global economy Pharmaceutical sector registered a growth of 167.82 percent and transport by 68.93 percent for the period 2008 to 2009. The sector having the most vibrant activity as regards Mergers and Acquisitions (M&A's) in India are telecommunication, Pharmaceutical and Steel. Among the companies involved in major deals in recent times are Tata, Ranbaxy Laboratories, Hindalco Industries. The acquisition of Corus by Tata Steel at US$ 12.2 is the largest ever cross border deal by an Indian Company.

Besides acquiring and merging with new firms, many steel firms are merging with their subsidiaries in a bid to consolidate and expand the production faculties. This is in sync with the global consolidation trend where companies are engaging in huge restructuring and consolidation. With fierce competition the key to survival is large scale production and benefiting from the related economies of scale. Recently major producers of steel that is Tata Steel, Essar Steel, JSW Steel, Jindal Steel, SAIL and IMFA have merged their subsidiaries to catapult as leading producers of steel

The merger with Visvesvaraya in 1999 was beneficial for both the companies as Visvesvaraya got a lease of life given the losses it was incurring and SAIL expanded its operating capacity and also could write off its profits against the losses. However the loss making Visvesvaraya Iron and Steel Limited did not have any positive impact whatsoever on the financials for SAIL.

In case of merger of SAIL with IISCO in 2006 we see that it was again a merger of a loss making subsidiary of SAIL with itself. The strategy was again to revive the loss making unit with the merging of its operations with a profitable unit like SAIL. In view of the global consolidation trend of consolidation in steel industry the merger was helpful as it expanded the operating capacity of SAIL besides providing it with reduced tax liability. Also it is seen that after the merger the Profitability and MPS had a statistically significant relationship. Also the merger is seen to have an effect on the MPS and EPS after the merger. The merger had a greater impact on the financial performance rather than the operating performance as is evident by the movement of the Profit Rate and Profit Margin.

The merger between IMFA and ICCL reflected positively on the operational and financial statistics of IMFA where the profitability of IMFA was affected in the longer run and the FATR of IMFA was affected both in the long and short run by the statistics of ICCL. Also the degree of correlation was high. The EPS of IMFA and ICCL also had a high positive correlation. The comparison between the pre and post merger figures of IMFA highlights that the merger did have a positive effect as regards Profitability, ICR, FATR and EPS. The Profit Margin and Profit Rate also increased leading to the conclusion that the operating efficiencies were enhanced more than the financial efficiencies due to the merger.

In case of the acquisition of Bellary Steel by Pittsburgh Iron and Steel the acquisition seemed to be going nowhere with the trend of losses continuing unabated after the merger for both the concerns involved. The Profit Margin and Profit Rate were dismal and the test of Hypothesis also reveals that the merger was proving to be a failure.

The acquisition of SISCOL by JSW steel proved to be a boon for SISCOL which benefitted from the core competencies of JSW and made a remarkable turnaround in operations and reported profits after the deal. It is seen that the post merger relation between MPS and Profitability is significant while the pre merger relation is not reflecting the positive impact the merger had on the MPS. The Profit Margin for JSW Steel jumped by 635 percent while Profit Rate increased by 74.6 percent. The losses incurred prior to 2004 are also responsible for this huge change in Profit Margin.

In case of NatSteel, after the merger took place in 2005 there was a significant increase in the rate of profits indicating that the sale of its steel division was proving to be profitable for the enterprise. Here again the profitability and MPS have significant relation before the merger and not after the merger. While as regards MPS the merger had a negative impact on it.

Tata Steel earned profits on a steady basis over the last decade. The merger had an impact on the profitability of the entity. The FATR and ICR were however unaffected and were statistically insignificant. The relation between the MPS and Profitability shows that both the variables had a statistically significant relation both before and after the merger. Also the Pre merger MPS and EPS had a relation with the Post merger MPS and EPS respectively. The Profit Margin for both NatSteel and Tata Steel increased significantly. The Profit Margin for Tata Steel increased significantly by 491.67 percent indicating a marked improvement in the operating efficiency.

From 2000 to 2003 Corus was registering losses and it was only in 2004 that Corus earned profits. However the rate of profits till 2004 to 2006 was in the range of 2 percent to 5 percent which were not very high. The test of hypothesis shows that the Profitability and FATR of Tata Steel prior to the merger had a relation the post merger figures. While Profitability had a negative correlation the FATR had a positive correlation with the post merger figures. The ICR was affected only in the longer run. Pre merger EPS had a very high degree of positive correlation with the post merger EPS indicating the benefits accrued to the shareholders.

The much hyped acquisition of Corus by Tata Steel reflected that the trend of profitability for Tata Steel continued.teh merger had no effect on the figures of Profitability, FATR or ICR as depicted by the test of Hypothesis. The relation between the Pre and Post merger figures is statistically insignificant. The relation between the MPS and Profitability before and after the merger is most interesting. Prior to the merger MPS and profitability had a statistically significant relation with a high degree of positive correlation. However after the merger there is a high degree of negative correlation indicating that the merger did not go down very well with the shareholders as per the market response. The EPS was affected by the merger only in the longer run. It is further seen that the Profit Margin for Tata Steel increased by 77.5 percent while the operational efficiency got a major boost with the Profit Rate moving up by 252.4 percent

The Profitability of Algoma Steel was impressive before the merger. Though after the merger it dropped, it was back on track in 2009 at 8.53 percent. The testing of hypotheses reveals that FATR was affected as a result of the merger both in the small and long run while the profitability was affected in the small run only. The ICR was however not affected in either case.

Despite the huge losses incurred initially in the year 2001 and 2002, Essar Steel recovered and posted profits at a steady rate from 2003 onwards. The test of various hypotheses reveals that the merger did not have an effect on any of the parameters, i.e. Profitability, FATR or ICR. For Algoma Steel the Profit margin increased while the Profit rate fell. For Essar Steel both Profit Margin and Profit Rate increased substantially.

11.4 Suggestions and Recommendations

11.4.1 Based on Findings of the Study

The selection of the target company should be done most extensively. Care should be taken to ensure that the target and acquirer should complement and supplement each other in resources. When structuring a merger or acquisition the main idea is to exploit the post-merger synergy. However it is most important to ensure that these are valued in the right earnest. Both over-valuation and undervaluation might prove detrimental to the interest of the acquiring company. The value of deals in the case of mergers and acquisitions in the recent years is running into billions. It affects the liquidity and capital structure of the company. The success of the deal has a bearing on the financial capabilities of the company. While finalizing a deal its impact on the financial position for several years to come should be considered deeply.

In the recent years there is a global trend of restructuring prevalent where Mergers and Acquisitions (M&A's) is proving to be a potent tool. However while taking a decision regarding a deal it is important to ensure that the acquisition move is not be solely based global trend but on individual assessment of the target company and other relevant details.

Besides considering the relevant details regarding the company it is also important to consider the macro environment as it has a deep and profound impact on the future of the deals. The timing of the merger or acquisition is one of the most important aspects of merger and acquisition deal. The perfect time may always not be when the market is in the state of boom. It might be profitable to target companies which have future prospects and purchase them while the valuations are low. In the case of listed companies the parameters involve the MPS of shares which to a large extent depends on market psyche and sentiment and how the investors respond to the announcement of the deal. It is important to ensure that the confidence of the investors is maintained for which disseminating information and not keeping them in the dark may prove to be an added advantage

In the case of foreign acquisitions the main idea is to capture advanced technology and an entry in a new market. However the core competencies of the Indian Steel producers lie in low cost and care should be taken to ensure that the resources are not pushed beyond a certain extent which might affect the cost advantage adversely in the longer run.

In the present global scenario the BRIC economies are making a considerable impact globally with their economic prowess. Besides concentrating on international markets, the Indian Steel Industry should undertake massive development of infrastructure and expansion in the domestic arena and other developing economies. Efforts should be made to keep a hold of the untapped domestic market which appears to have great potential in the near future. Even the world's largest steelmaker Arecelor-Mittal is looking to enter India through acquiring stake in Uttam Galva Steel. The recent trend of the Indian Steel Industry is towards consolidation and restructuring. The main idea is to increase the production capacity and gain from economies from large scale. The idea of merging or being acquired may be the hope for survival of small producers as the trend shows that there would be few big producers rather than many small producers.

The acquiring company should ensure that it does not involve or get muddled in rival bidding too deeply and end up paying more than what the acquiring company is valued. In the case of the high pitched Tata-Corus battle many industry experts feel that Tata might have ended paying a high price and the success of the acquisition is yet to be finally gauged. In the recent times the banking and financial industry has been flourishing at a remarkable pace. Their facilities in terms of loans should be judiciously used and should not be used to make unnecessary deals and create a debt burden which might be difficult to repay.

The acquiring and acquired commonly have to take care to bring about not only post merger financial and operating integration but also integration of the people involved in order to create a positive environment. Acquiring loss making subsidiaries might be a good incentive to reduce tax-liability and increase operating capacity but in a large scale industry it should be ensure that the practise does not lead to a big dent on the financial performance as maintaining balance is crucial.

11.4.2 General Suggestions and Recommendations

The most important aspect of a merger or acquisition is facilitating smooth post merger integration. For the purpose various steps need to be accorded highest level of importance. It might be advisable to do so in phases in order to facilitate the complex process. Merger and Acquisition is a potent and most useful tool to expand the global presence. With major companies worldwide engaging in it fiercely it might become a necessity rather than just an option for growth. It is necessary for big and small companies to recognize and accept this trend and adjust their business strategies accordingly.

It is necessary to maintain balance in synergies and ensure that all aspects are given due importance and it does not lead to ignoring of one aspect for another. It might be advisable to study recent Mergers and Acquisitions (M&A's) in the same or related industries to develop an understanding of the same. However it cannot be solely relied upon and requires a detailed case by case study. The management of the company should be prepared to face new challenges and transform them into opportunities. A key aspect is innovation and creativity. The management should be prepared to accept changes and employ strategies keeping in mind the changed circumstances and ground realties rather than focus on just set conventions and rules. It might be advisable to develop core strategic teams which are professionally trained to facilitate a merger and acquisition integration.

It is imperative to maintain a policy of tolerance and cultural integration as it is necessary to sort out the human resource issue in the most amicable manner for post merger integration. The policy of employees retention is a sensitive aspect and care should be taken to maintain an environment where the focus is on efficiency and productivity and the workers are ably simulated and motivated to work in a new work environment after the merger.

The management should also keep contingency measures and back up plans intact. In case the plans and strategies do not work out, risk management mechanism should be in place to address unforeseen circumstances.

11.5 Contribution to the Existing Stock of Knowledge on the Subject Matter

The Researcher has attempted to make a sincere attempt for making a worthy contribution to the existing literature regarding Mergers and Acquisitions (M&A's). The study aims to explore the effect of the merger on primarily the post-merger financial performance of the companies involved in the Merger and Acquisition (M&A's) activity. For the purpose the financials of both the acquired/merged and the acquiring/merging entities are taken into consideration. Though, Mergers and Acquisitions is a widely researched topic, the studies done on the post-merger performance are limited. The Indian Steel Sector is taken up for analysis which is experiencing vibrant activity in the past few years. Significant deals that have taken place both in the domestic and international scene are taken up for detailed analysis. The data is classified on the basis of pre-merger and post-merger activity and internal and external figures affecting the performance are accounted for. The effect of the profitability on the Market Price of Shares (MPS) and vice-versa is also explored.
The study aims to study the viability of the Mergers and Acquisitions (M&A's) undertaken in the Indian Steel Industry on the basis of the post-merger financial performance.

11.6 Directions for Future Research

The Researcher suggests the following core areas for the purpose of future research related to the topic of Mergers and Acquisitions (M&A's)

i. The impact of the merger announcements on the share prices of the rival and bidding firms can be examined.
ii. In the present era Human Resources is a vital factor in determining the success or failure of the Mergers and Acquisitions (M&A's) and it is a qualitative aspect which is difficult to measure and quantify but has become extremely important in the present global economy where people and cultural cohesion is the key and especially in a cross border deal.

iii. Also in the wake of recent recession question marks are being raised about the valuations of deal done under depressed conditions where the target company is valued at a much lower price than it's worth.

iv. Another important aspect is the determining the rate of exchange of currencies which keeps on fluctuating until the negotiations materialize and a rise or fall may work in favour of one company while harm another in case of cross-border Mergers and Acquisitions (M&A's) . There is a need to design an appropriate model or mechanism for that.

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Appendices

Appendices

Appendix 1: Data for Analysis of SAIL

Year	Equity Shareholders Fund	Loan funds	Fixed assets	Current assets	Current Liabilities
1993	5272.20	9521.27	10855.05	7111.84	3764.24
1994	5663	11272	12397	7945	4056
1995	6556	12136	14726	7920	4715
1996	7937	14476	12397	9186	5001
1997	8469.49	17421.21	19566.69	11811.27	5958.59
1998	8557.98	20014.61	21181.59	13459.96	6138.17

Source: Compiled from the Annual Reports of SAIL from 1994 to 2009. Retrieved from http://www.sail.co.in and http://www.moneycontrol.com/india/stockpricequote/steellarge/steelauthorityindia/SA

Appendix 2: Data for Analysis of SAIL

Year	Capital Employed	Interest Expense	Total Assets	PBIT	EPS	Net Profit
1993	8746	671	18987.49	1094	1.06	423
1994	10900	765	21474	1310	1.37	545
1995	10762	710	23952	1873	2.78	1108
1996	12956	808	28089	2127	3.30	1319
1997	18486	1179	31849.29	1767	1.25	515
1998	21145	1554	34710.76	1703	0.78	133

Source: Compiled from the Annual Reports of SAIL from 1994 to 2009. Retrieved from http://www.sail.co.in and http://www.moneycontrol.com/india/stockpricequote/steellarge/steelauthorityindia/SA

Appendix 3: Data for Analysis of SAIL

Year	Gross Sales	Net Worth	Loan funds	Current assets	Current Liabilities
1999	14944	6886	21017	11399	4880
2000	16250	4765	15082	8259	5027
2001	16233	4163	14251	8362	5274
2002	15502	2252	14019	7107	4849
2003	19207	1989	12928	7282	4777
2004	24178	4659	8690	8075	6025
2005	31805	10011	5770	14187	6608
2006	32280	12386	4298	17384	8108
2007	39189	17184	4181	20379	6500
2008	45555	23004	3045	26318	9439
2009	48681	27984	7539	34511	12228

Source: Compiled from the Annual Reports of SAIL from 1994 to 2009. Retrieved from http://www.sail.co.in and http://www.moneycontrol.com/india/stockpricequote/steellarge/steelauthorityindia/SA

Appendix 4: Data for Analysis of SAIL

Year	Capital Employed	Interest Expense	Total Assets	PBIT	Net Profit
1999	24826	2017	29995	342.89	-1574
2000	19105	1789	25607	71.56	-1720
2001	18265	1752	2745.32	981.12	-729
2002	17056	1562	26060.9	-140.58	-1707
2003	16541	1334	25532.22	1013.84	-304
2004	15218	901	22659.05	3495.88	2512
2005	20064	605	28086.82	9940.15	6817
2006	21782	468	30811.63	6116.76	4013
2007	25476	332	33817.79	8728.28	6202
2008	28450	251	40876.16	11643.89	7537
2009	34552	253	53976.64	7486.27	6175

Source: Compiled from the Annual Reports of SAIL from 1994 to 2009. Retrieved from http://www.sail.co.in and http://www.moneycontrol.com/india/stockpricequote/steellarge/steelauthorityindia/SA

Appendix 5: Post-Merger Earning per Share and Market Price per Share of SAIL (BSE: 500113)

Year	Earnings per Share	Percentage increase over previous year	Market Price per Share	Percentage increase over previous year
2000*	-4.16	-	8	-
2001	-1.76	-57.6923	6	25
2002	-4.13	134.6591	5	-16.67
2003	-0.74	-82.0823	9	80
2004	6.08	-921.622	32	255.56
2005	16.5	171.3816	63	96.88
2006	9.72	-41.0909	83	31.75
2007	15.02	54.52675	113	36.15
2008	18.25	21.50466	185	63.72
2009	14.95	-18.0822	96	48.11

Note: Prices for March

Source: Compiled and Calculated from the Annual Reports of SAIL from 1994 to 2009. Retrieved from http://www.sail.co.in and http://www.moneycontrol.com/india/stockpricequote/steellarge/steelauthorityindia/SA

Appendix 6: IISCO

Year	Borrowing	Net Worth	current assets	current liabilities	fixed assets	total assets
1999	1331.03	-1521.41				
2000	133.31	-37.96	517.47	735.01	348.02	1296.73
2001	133.21	-226.1	448.23	839.87	337.76	1404.17
2002	135.97	-406.97	303.63	860.21	318.17	1430.77
2003	103.06	-588.25	376.36	1114.7	299.64	1655.81
2004	264.91	-561.21	269.44	1177.3	284.715	1722.83

Source: Compiled from Annual Report of IISCO from 1999 to 2004. Retrieved from http://www.business-beacon.com/kommon/bin/sr.php?kall=wcos&cocode=98859&type=s&tab=1010

Appendix 7: SISCOL

Year	Equity Shareholders Fund	Total Debt	Fixed assets	Current assets	Current Liabilities
2003	34.05	831.49	874.47	76.91	89.24
2004	-119.35	942.17	908.57	119.14	120.18
2005	-80.61	936.68	803.35	238.06	188.69
2006	169.77	1065.17	1062.03	265.45	124.50
2007	223.85	1463.95	1672.77	319.19	307.13

Source: Compiled from Annual Reports of SISCOL 2003 to 2007. Retrieved from http://www.moneycontrol.com/financials/southernironsteel/profit-loss/SIS04

Appendix 8: SISCOL

Year	Interest Expense	Total Assets	PBIT	EPS	Net Profit
2003	34.15	954.79	-12.74	-6.05	-45.70
2004	106.77	943.01	-46.36	-20.31	-153.4
2005	10.69	1044.76	35.54	5.17	39.05
2006	12.40	1359.44	10.82	1.55	41.27
2007	52.64	1994.92	104.37	2.06	55.05

Source: Compiled from Annual Reports of SISCOL 2003 to 2007. Retrieved from http://www.moneycontrol.com/financials/southernironsteel/profit-loss/SIS04

Appendix 9: JSW Steel

Year	Net Worth	Loan funds	Current assets	Current Liabilities	Fixed Assets	Total Assets
2000	987.62	4098.47	675.14	1161.33	1495.06	6247.52
2001	1102.71	4974.60	669.63	939.27	1507.27	7016.94
2002	803.89	5612.31	891.40	924.87	3944.88	7341.49
2003	1352.03	5940.64	737.50	817.02	5692.64	8182.68
2004	1631.08	4787.03	1004.80	897.37	5206	7315.48
2005	3149.72	3568.44	1849	1608.26	6422.46	8899.88
2006	4356.22	4096.05	2745.42	2320.12	8351.49	11514.42
2007	5594.05	4173.03	2479.18	2279.28	10183.76	13059.02
2008	7677.25	7546.53	3086.54	4101.83	16550.73	20577.99
2009	7959.25	11272.63	4631.64	7557.21	22224.21	28210.25

Source: Compiled from JSW Annual Reports .Retrieved from
http://www.moneycontrol.com/financials/jswsteel/balance-sheet/JSW01 and
http://www.jsw.in/

Appendix 10: JSW Steel

Year	MPS	Interest Expense	EPS	PBIT	Net Profit
2000	4.55	197.67	-1.23	57.45	-148.18
2001	4.75	194.32	-0.38	151.39	-49.62
2002	2	444.35	-2.72	77.9	-351.07
2003	3.9	563.45	-0.86	370.19	-110.67
2004	8.2	409.28	3.92	708.68	528.68
2005	360.55	469.87	64.98	1945.81	870.11
2006	302.7	360.32	55.57	1661.46	864.29
2007	493.45	399.54	80.11	2314.72	1292
2008	819.1	440.4	95.26	2819.63	1728.19
2009	231.85	797.25	22.7	2265.01	458.5
2010	1051.3*		68.45*		1306

*MPS as on 23 February, 2010

**Nine months

Compiled from JSW Annual Reports. Retrieved from
http://www.moneycontrol.com/financials/jswsteel/balance-sheet/JSW01 and
http://www.jsw.in/

Appendix 11: Bellary Steel

Year	Net Worth	Loan funds	Current assets	Current Liabilities	Fixed Assets	Total Assets
2001	205.83	871.96	254.83	96.29	919.23	1174.08
2002	66.54	979.13	37.14	94.03	1102.54	1139.7
2003	52.94	1203.6	123.54	110.28	1243.26	1464.9
2004	-32.7	1426.98	120.46	119.68	1393.5	1514.36
2005	-104.6	1618.14	114.98	120.7	1519.27	1634.92
2006	-184.08	1837.38	108.81	110.91	1655.47	1764.8
2007	-291.32	2079.46	108.47	119.43	1799.1	1908.03
2008	-406.89	2332.8	116.89	129.38	1938.41	2056.48
2009	-550.5	2704.76	111.83	137.34	2179.76	2292.59

Source: Compiled from Annual Report of Bellary Steel and Alloys Limited from 2000 to 2006. Retrieved from http://www.moneycontrol.com/financials/bellarysteelalloys/balance-sheet/BSA01

Appendix 12: Bellary Steel

Year	MPS (Rs)	Interest Expense	EPS (Rs)	PBIT	Net Profit
2000	4				
2001	3	29.38	-3.57	12.33	-17.2
2002	0.8	10.13	-33.75	-71.33	-179.38
2003	1.05	45.67	-18.67	-0.21	-99.21
2004	1.92	19.92	-3.05	-2.39	-22.31
2005	6.87	66.93	-10.06	-3.09	-73.62
2006	0.63	78.21	-1.11	-10.73	-81.13
2007	0.99	96.65	-1.46	-10.1	-107.24
2008	4.04	110.28	-1.58	-5.18	-115.57
2009	1.59	126.86	-1.96	-13.84	-143.61

Source: Compiled from Annual Report of Bellary Steel and Alloys Limited from 2000 to 2006. Retrieved from http://www.moneycontrol.com/financials/bellarysteelalloys/balance-sheet/BSA01

Appendix 13: Pittsburgh Iron & Steels Ltd.

	Sales (Rs.crore)	PBDITA (Rs.crore)	PAT (Rs.crore)	PBDITA/Total income (%)	PAT/Total income (%)	Debt to equity ratio	Net cash flow (Rs.crore)
2000	17.46	2.65	0.79	15.11	4.50	1.1	0.19
2001	17.67	2.50	0.63	14.06	3.55	1.04	-0.22
2002	17.36	1.25	-0.54	7.12	-3.08	1.23	-0.99
2003	10.58	-0.29	-1.94	-2.59	-18.10	0.88	
2004	4.50	0.36	-1.17	7.09	-25.83	0.74	-0.07
2005	2.33	-1.02	-0.76	-33.66	-28.90	0.11	0.06

Source: Compiled from Annual Report of Pittsburgh Iron and Steel from 2000 to 2006. Retrieved from http://money.rediff.com/companies/pittsburgh-iron-and-steels-ltd/16020124/profit-and-loss and http://www.business-beacon.com/kommon/bin/sr.php?kall=wmnahv&repnum=5433&cocode=31979&dealtype=M&dealdate=20060320&dealno=1

Appendix 14: Pittsburgh Iron & Steels Ltd.

	Profit	Current Assets	Current Liabilities	Fixed Assets	Total Assets	EPS
2000	0.79	NA	NA	NA	NA	NA
2001	0.63	NA	NA	NA	NA	NA
2002	-0.54	NA	NA	NA	NA	NA
2003	-1.94	NA	NA	NA	NA	NA
2004	-0.82	.70	.12	.06	6.22	-1.93
2005	-1.03	6.66	5.98	.08	2.68	-2.43
2006	-0.82	0.75	0.09	.08	0.84	-1.94
2007	-0.1	2.21	0.63	.47	6.22	0.03
2008	-	3.29	1.23	2.91	2.68	-0.2

Source: Compiled from Annual Report of Pittsburgh Iron and Steel from 2000 to 2006. Retrieved from http://money.rediff.com/companies/pittsburgh-iron-and-steels-ltd/16020124/profit-and-loss and http://www.business-beacon.com/kommon/bin/sr.php?kall=wmnahv&repnum=5433&cocode=31979&dealtype=M&dealdate=20060320&dealno=1

Appendix 15: Indian Charge Chrome Limited

Year	Net Worth	Loan funds	Current assets	Current Liabilities	Fixed Assets	Total Assets
2001	-1803.78	501.32	70.08	64.79	300.23	566.11
2002	-2252.60	377.60	68.84	154.58	267.08	532.18
2003	-2637.59	331.47	53.42	152.08	234.29	483.55
2004	-2707.1	377.60	97.67	166.60	267.08	494.82
2005	-2679.98	501.32	130.08	165.89	300.23	493.79

Source: Compiled from Annual Reports of Indian Chrome Charge Limited from 2001 to 2005. Retrieved from http://money.rediff.com/companies/indian-charge-chrome-ltd/14520004/ratio
and http://money.rediff.com/companies/indian-charge-chrome-ltd/14520004/ratio

Appendix 16: Indian Charge Chrome Limited

Year	Interest Expense	EPS (Rs)	PBIT	Net Profit
2001	316.55	-54.14	1.65	-314.9
2002	345.99	-63.79	-31.67	-370.79
2003	374.91	-66.32	-18.69	-385.46
2004	106.65	-12.13	27.41	-70.48
2005	60.63	-0.76	48.3	-4.46

Source: Compiled from Annual Reports of Indian Chrome Charge Limited from 2001 to 2005. Retrieved from http://money.rediff.com/companies/indian-charge-chrome-ltd/14520004/ratio
and http://money.rediff.com/companies/indian-charge-chrome-ltd/14520004/ratio

Appendix 17: Indian Metals and Ferro Alloys Limited

Year	Net Worth	Loan funds	Current assets	Current Liabilities	Fixed Assets	Total Assets
2000	14.06	87.73	83.03	21.78	40.55	123.58
2001	16.56	91.99	95.95	28.80	41.4	137.35
2002	15.13	98.91	103.49	31.49	42.05	145.54
2003	23.42	103.59	119.49	37.03	44.56	164.05
2004	39.43	97.19	154.15	63.58	46.05	200.2
2005	66.06	101.36	170.52	52.46	49.37	219.89
2006	124.02	641.32	481.81	166.52	450.05	931.86
2007	137.78	618.3	489.19	151.2	418.08	907.27
2008	222.62	531.67	526.64	224.72	452.37	979.01
2009	458.33	352.38	593.03	325.02	542.7	1135.73

Source: Compiled from Annual Reports of Indian Metals and Ferro Alloys from 2000 to 2005 Retrieved from http://www.moneycontrol.com/financials/indianmetalsferroalloysltd/balance-sheet/IMF01 and
http://www.moneycontrol.com/financials/indianmetalsferroalloysltd/balance-sheet/IMF01

Appendix 18: Indian Metals and Ferro Alloys Limited

Year	Interest Expense	EPS (Rs)	PBIT	Net Profit
2000	12.06	1.42	13.88	1.71
2001	10.01	3.83	15.13	4.59
2002	9.12	0.09	9.27	0.11
2003	9.97	8.03	26.02	9.64
2004	5.37	16.11	35.32	19.35
2005	8.42	25.03	56.23	30.05
2006	53.02	12	30.42	18.58
2007	47.87	9.38	98.99	19.99
2008	43.97	49.17	259.24	104.8
2009	42.71	122.28	391.71	260.64

Source: Compiled from Annual Reports of Indian Metals and Ferro Alloys from 2000 to 2005 Retrieved from http://www.moneycontrol.com/financials/indianmetalsferroalloysltd/balance-sheet/IMF01 and
http://www.moneycontrol.com/financials/indianmetalsferroalloysltd/balance-sheet/IMF01

Appendix 19: Nat Steel

Figures in S$

Year	Shareholders fund	Loan funds	Current assets	Current Liabilities	Fixed Assets
2000	1626890	31884	1899599	1230042	1275497
2001	924232	109091	831774	582147	1025238
2002	1167241	22046	1236519	503930	578850
2003	882683	32857	861138	375410	549396
2004	970102	27464	882174	315180	565744
2005	424892	28300	370093	171488	346620
2006	451323	31997	329738	157605	301604
2007	520021	15361	362756	131780	341306
2008	500315	20591	384240	150164	321937
2009	495283	16958	280740	92121	361755

Source: Compiled from NatSteel Annual Reports 2000 to 2009. Retrieved from http://www.nsl.com.sg/financialresults.html and <http://investing.businessweek.com/research/stocks/charts/charts.asp?ticker=NSL:SP

Appendix 20: Nat Steel

Figures in S$

Year	Total Assets	EPS (S$)	MPS S$	Net Profit
2000	3162089	253.4	1	949652
2001	1846949	-35.7	0.6	-124917
2002	1815369	50.4	0.56	183536
2003	1400853	21.5	0.73	80194
2004	1447918	32.8	0.36	122375
2005	716713	18.72	0.85	97935
2006	691499	35.3	1.45	140524
2007	704062	29.3	1.51	100472
2008	706177	20.54	1.28	75385
2009	642495	17.7	1.15	66892

Source: Compiled from NatSteel Annual Reports 2000 to 2009. Retrieved from http://www.nsl.com.sg/financialresults.html and <http://investing.businessweek.com/research/stocks/charts/charts.asp?ticker=NSL:SP

Appendix 21: Tata Steel

Year	Shareholders fund	Loan funds	Current assets	Current Liabilities	Fixed Assets	Total Assets
2000	4558.40	4907.23	3025.11	2614.76	8227.16	12080.39
2001	4888.43	4672.22	3225.61	2087.13	14978.25	12530.91
2002	3518.55	4995.57	3562.33	2181.42	8563.15	12540.82
2003	3186.02	4225.61	3648.1	2690.58	8738.35	12386.45
2004	4515.86	3373.28	4083.01	3998.79	10051.97	14290.95
2005	7059.92	2739.7	4083.58	3808.72	11544.89	15843.29
2006	9755.3	2516.5	4237.6	3699.99	13935.01	18425.88
2007	14096.15	9645.33	13701.89	8248.23	17146.74	31051.16
2008	27300.73	18021.69	36962.44	30193.66	16726.75	53844.3
2009	30176.26	26946.18	10285.09	8974.05	56854	67715.82

Source: Compiled from Tata Steel's Annual Reports 2000 to 2009. Retrieved from http://www.tatasteel.com/investors/performance/annual-report.asp and http://www.moneycontrol.com/financials/tatasteel/balance-sheet/TIS
And http://www.moneycontrol.com/india/stockpricequote/steellarge/tatasteel/TIS

Appendix 22: Tata Steel

Year	PBIT	Interest	EPS (Rs)	MPS Rs	Net Profit	Sales
2000	1166.31	529	11.49	68.29	422.59	6886.28
2001	1241.13	376.61	14.64	72.09	553.44	7759.44
2002	647.65	369.75	5.51	57.54	204.90	7607.48
2003	1603.69	304.82	27.43	78.81	1012.31	9793.27
2004	2857.45	122.17	47.32	225.96	1746.22	11920.96
2005	5445.99	186.80	62.77	354.32	3474.16	15876.87
2006	5361.7	118.44	63.35	474.07	3506.38	17144.22
2007	6456.58	173.90	65.28	397.36	4222.15	19762.57
2008	7996.34	878.70	67.17	693.15	4687.03	22191.80
2009	8806.11	1152.69	69.45	206	5201.74	24,315.77

Source: Compiled and Calculated from Tata Steel's Annual Reports 2000 to 2009. Retrieved from http://www.tatasteel.com/investors/performance/annual-report.asp and http://www.moneycontrol.com/financials/tatasteel/balance-sheet/TIS
And http://www.moneycontrol.com/india/stockpricequote/steellarge/tatasteel/TIS

Appendix 23: Corus

Year	Shareholders fund	Loan funds	Current assets	Current Liabilities	Fixed Assets	Total Assets
2000	3495	1837	4255	1834	4143	8398
2001	3061	1646	3368	1729	3750	7118
2002	2722	1464	3305	1636	3126	6431
2003	2797	1308	3396	1583	2984	6380
2004	3258	1433	4210	1883	3059	7269
2005	3352	1434	4446	2467	3496	7942
2006	3930	1359	4412	2348	3668	8080

Source: Compiled from Annual Reports of Corus from 2000 to 2006 Retrieved from http://www.corusgroup.com/en/company/financial_information/report_and_accounts

Appendix 24: Corus

Year	PBIT	Interest	EPS (Rs)	MPS Rs	Net Profit	Sales
2000	-1029	-100	-30.19		-940	9509
2001	-354	-103	-13.42		-419	7669
2002	-310	-92	-14.23		-458	7188
2003	-154	-98	-9.25		-305	7953
2004	680	-118	10.05		446	9332
2005	662	-101	10.17		432	9155
2006	457	-202	21.1		229	9733

Source: Compiled from Annual Reports of Corus from 2000 to 2006 Retrieved from http://www.corusgroup.com/en/company/financial_information/report_and_accounts

Appendix 25: Essar Steel

Year	Shareholders fund	Loan funds	Current assets	Current Liabilities	Fixed Assets	Total Assets
2001	986.41	5443.22	2191.22	1286.47	5282.06	7716.1
2002	-213.21	5748.49	3498.88	2865.56	4787.64	8400.84
2003	427.3	5248.17	3655.08	2660.27	4588.76	8335.74
2004	1165.69	4674.97	3799.53	2355.1	4396.23	8195.76
2005	1724.86	4727.55	2395.68	965.1	4606.92	7483.56
2006	4031.47	8005.66	3873.51	1551.47	9468.78	13768.04
2007	4467.95	6943.24	4397.41	3488.83	10430.8	15066.44
2008	4631.33	6116.58	3935.19	3377.21	10364.23	14299.42
2009	4775.66	7311.39	4580.12	2721.36	10469.74	15087.16

Source: Compiled from Essar Steel Annual Report 2001 to 2009. Retrieved from http://www.essar.com/common.aspx?cont_id=V+5qa1L+feY= and http://www.moneycontrol.com/financials/essarsteel/balance-sheet/ES01

Appendix 26: Essar Steel

Year	PBIT	Interest	EPS (Rs)	Net Profit	Sales
2001	284.98	722.66	-10.35	-345.91	2297.13
2002	-525.58	939.05	-35.89	-1199.37	2934.64
2003	365.57	300.04	0.05	1.51	1625.46
2004	585.71	575.27	1.17	59.99	3703.27
2005	1542.46	550.73	11.63	590.15	6116.71
2006	1207.01	422.67	10.75	530.18	6182.58
2007	1324.2	617.94	4.38	436.49	8194.35
2008	1521.74	829.47	3.71	428.62	10743.32
2009	1796.94	789.47	1.62	185.2	11688.3

Source: Compiled from Essar Steel Annual Report 2001 to 2009. Retrieved from http://www.essar.com/common.aspx?cont_id=V+5qa1L+feY= and http://www.moneycontrol.com/financials/essarsteel/balance-sheet/ES01

Appendix 27: Algoma Steel

Millions of Canadian dollars

Year	Shareholders fund	Long term debt	Current assets	Current Liabilities	Fixed Assets	Total Assets
2001	300	243	325	188	716	1041
2002	345	218	445	258	687	1132
2003	370.1	183.3	369.7	160.6	659.1	1028.8
2004	912.3	158.9	1028.4	190.9	645	1673.4
2005	893.5	9.2	1040.5	386.6	643	1683.5
2006	885.1	7.7	832.3	224.4	673.1	1505.4
2007*	580.1	749.1	620.2	437.5	2041.6	2661.8
2008*	566	776.6	613.1	428.7	2017.3	2630.4
2009*	945.5	876.4	573.9	424.6	2473.6	3047.6

Source: Compiled from Algoma Steel Annual Reports 2001 to 2009. Retrieved from http://www.algoma.com/investors/financial-reports/

Appendix 28: Algoma Steel

Millions of Canadian dollars

Year	PBIT	Interest	EPS (Rs)	MPS Rs	Net Profit	Sales
2001	-157	16	-6.77		-363	912
2002	76	20	1.42		43	1031
2003	12.6	19.6	0.27		8.4	1138.2
2004	545	18.5	8.83		343.8	1803.1
2005	363.5	16.7	6.04		239.6	1917.6
2006	324.5	0.2	6.1		221.8	1939.7
2007*	69.9	1.3			14.8	911.4
2008*	-57.8	74.8			-11.4	1436
2009*	70.1	77.5			217.3	2547.5

Source: Compiled from Algoma Steel Annual Reports 2001 to 2009. Retrieved from http://www.algoma.com/investors/financial-reports/